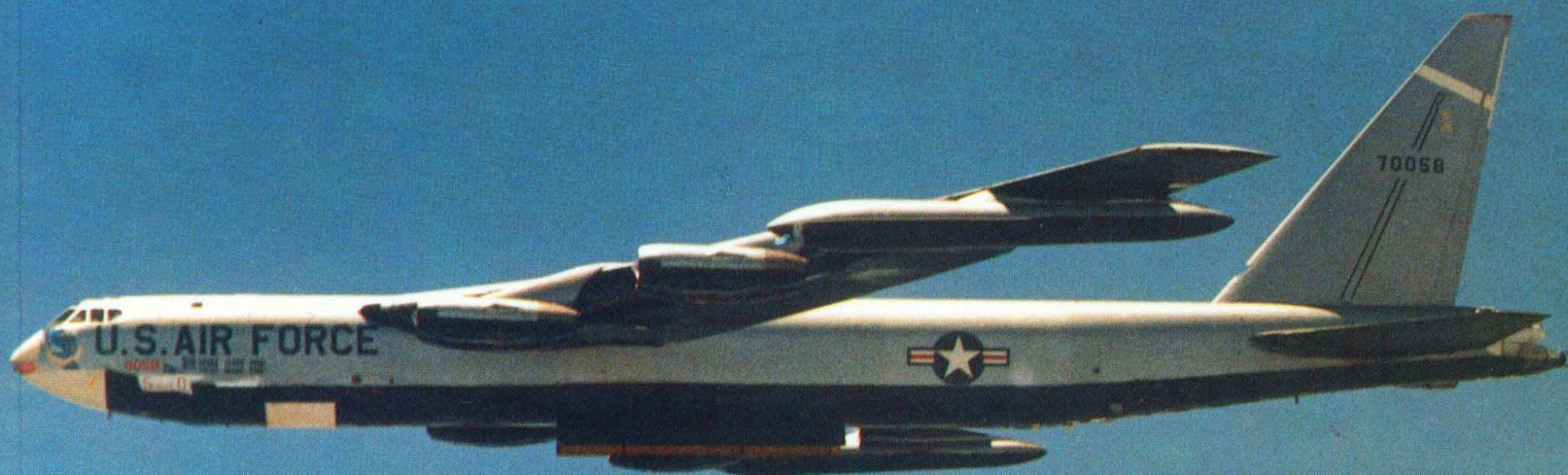


# B-52

## STRATOFORTRESS

Jeffrey L. Ethell

*Warbirds*  
fotofax





**Warbirds**

fotofax

# B-52

**STRATOFORTRESS**

Jeffrey L. Ethell

**Front cover illustration:**

B-52Fs drop their loads over South Vietnam in late 1965, just after the aircraft was introduced to combat. The black high-altitude paint was applied over the white anti-flash in order to hamper visual detection at high altitude. (USAF)

**Back cover illustrations:**

**Top:** A BUFF cockpit is a busy place during an aerial refuelling. The controls and the throttles move constantly in order to keep the aircraft centred under the tanker. Pilots find they can almost move the controls before the bomber starts to wander, an anticipation born of experience. (USAF)

**Below:** A fully laden B-52D taxis for a combat mission at U-Tapao, Thailand. The drooping wings are indicative of full fuel tanks. (USAF)





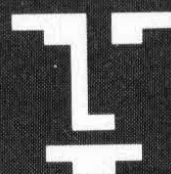


1. 29 November 1951, Boeing Field, Seattle – the XB-52 is rolled out for the first time under wraps and at night for security reasons. (Boeing)

# B-52

## STRATOFORTRESS

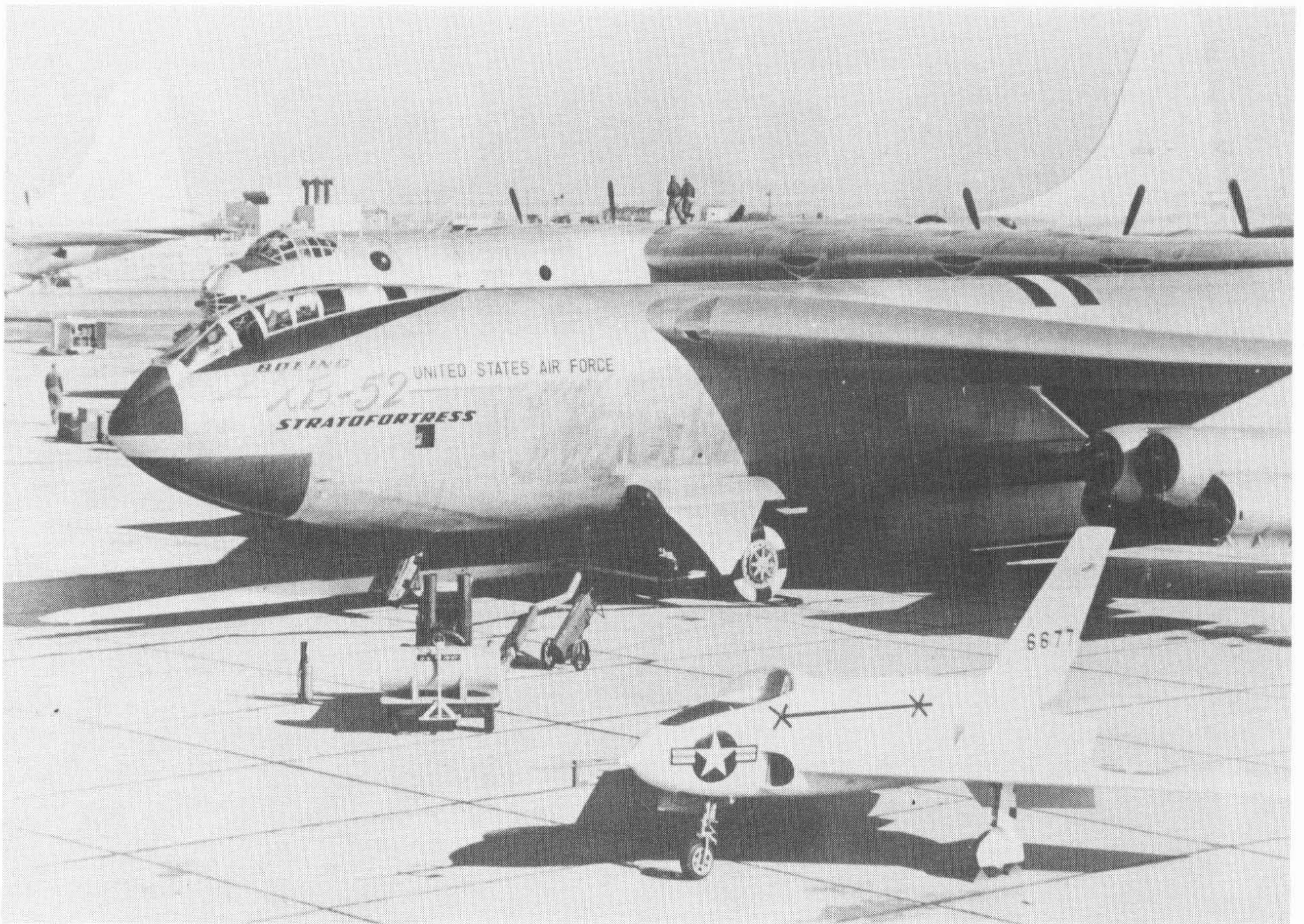
Jeffrey L. Ethell



ARMS AND  
ARMOUR







▲ 2 ▼ 3



**2.** New monster on the block. The XB-52 sits between the aircraft it will replace, the B-36, and another experimental type, the Northrop X-4 Bantam. The long tandem-place canopy was featured on the XB-52 and YB-52 only, the Air Force preferring the traditional bomber crew compartment.

**3.** The second Stratofortress prototype, the YB-52, sits with its elder brother, the B-47, at Boeing Field on 25 May 1952, a month after its first flight. Both aircraft were well advanced for their day with top speeds and gross weights far in excess of expectations. (USAF)



# INTRODUCTION

First published in Great Britain in 1989 by Arms and Armour Press, Artillery House, Artillery Row, London SW1P 1RT.

Distributed in the USA by Sterling Publishing Co. Inc., 387 Park Avenue South, New York, NY 10016-8810.

Distributed in Australia by Capricorn Link (Australia) Pty. Ltd., P.O. Box 665, Lane Cove, New South Wales 2066, Australia.

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British Library Cataloguing in Publication Data:

Ethell, Jeffrey

B-52 Stratofortress.

1. Boeing B-52 aeroplanes, to 1980

I. Title II. Series

623.74'63

ISBN 0-85368-937-7

Designed and edited by DAG Publications Ltd. Designed by David Gibbons; edited by Michael Boxall; layout by David Gibbons; typeset by Ronset Typesetters Ltd, Darwen, Lancashire, and by Typesetters (Birmingham) Limited, Warley, West Midlands; camerawork by M&E Reproductions, North Fambridge, Essex; printed and bound in Great Britain by The Alden Press Limited, Oxford.

**J**ust after the Second World War, when Boeing initiated its first design studies on a turboprop bomber, no one expected the aircraft to stay operational for well over fifty years. With US Air Force demands for ever higher performance, the company managed to design an aircraft that should not have been a reality for another ten years given the technology of the day. Thanks to the advent of the Pratt & Whitney J57 turbojet engine, Boeing's new addition to the 'Fortress' line, the XB-52 Stratofortress, emerged with the bomb load and performance asked for.

The XB-52 was rolled out at Seattle on 20 November 1951, followed by the YB-52 on 15 March 1952. So impressed was the Air Force that it ordered 500 of the bombers before either prototype had flown, showing an immense amount of faith in the design considering how expensive it was. That taxpayers' money has seldom been so well spent is borne out by the Stratofort's forming the backbone of American nuclear deterrence since the mid-1950s. Through continual modifications and adaptations to different roles, the aircraft has remained available when hopes for replacement have been dashed over and over again.

Initially a high-altitude bomber replacement for the Consolidated B-36, the B-52 was pushed down to low level penetration by increasingly effective Soviet defences in the early 1960s. Since gravity nuclear weapons would place a low-flying bomber in the heart of the target area, a succession of stand-off weapons was deployed, including the Hound Dog air-to-ground missile, the Short Range Attack Missile (SRAM) and the long-range Air Launched Cruise Missile (ALCM). To keep the large bomber survivable, sophisticated active and passive electronic countermeasures (ECM) suites, chaff and flares, as well as all-weather electro-optical viewing systems, were developed on a regular time-scale to match the Soviet air defence threat.

The list of modifications to the airframe and its insides began in 1959 and continue through the present, making the BUFF (Big, Ugly Fat Fellow) a first line aircraft even when deployed by crews who are younger than the airframes they fly. Modifications include terrain avoidance radar; stability augmentation; electro-optical viewing system (EVS) with low light TV and forward-looking infrared (FLIR); world-wide satellite communications capability; wing rebuilding and airframe strengthening; avionics modernization – and on it goes as the USAF has awaited the B-70, then the B-1 and now the B-2 advanced tactical or stealth bomber.

In 1965 the Stratofort went to war in Southeast Asia and did not leave until it was over. Though used as a tactical aircraft when fighters were flying strategic missions up north, it struck terror due to the sheer tonnage dropped during a single mission. When it was finally used to get things over with during 'Linebacker II' in December 1972, it proved its worth immeasurably.

Certainly not a pilot's aircraft, the B-52 is a mission-effective weapons platform handled by a crew of professionals who are not particularly concerned about the joys of flight. As one BUFF pilot remarked, 'The aircraft has enough aluminium and steel in it to make 20,000 garbage cans. If all the wire and cable were laid end to end it would stretch 100,000 miles. The combined power of its engines is equal to 12,000 locomotives. And it flies like 12,000 locomotives pulling 20,000 garbage cans on the end of 100,000 miles of wire.'



As the B-52 heads for the next century in remaining operational, it easily ranks high in the list of the most successful military aircraft in history. A look at its past success is a tribute to designers who were far ahead of their time in creating an aircraft that would end up outliving them all.

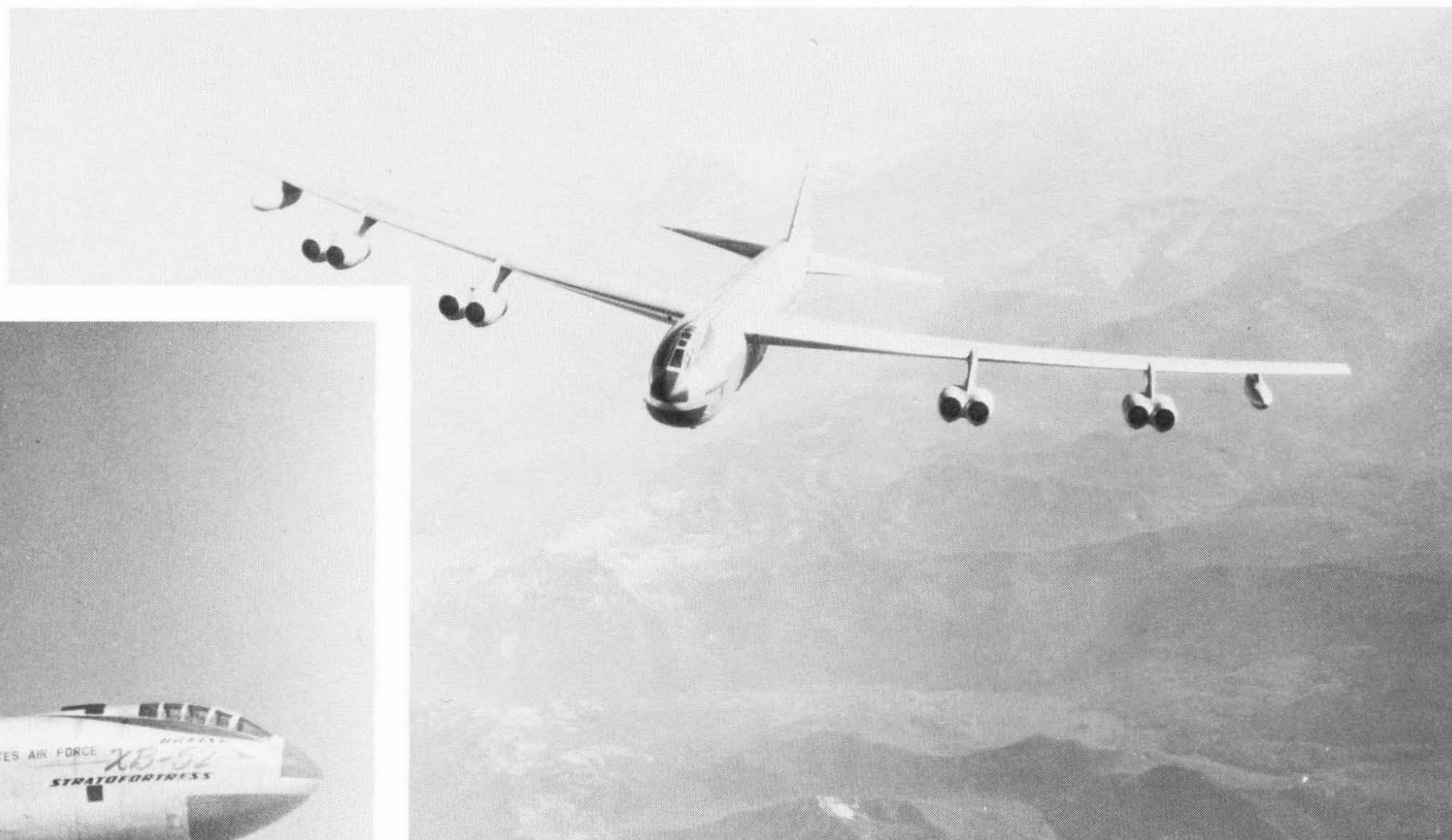
For help in rounding up new data and photographs of an old subject, I should like to thank Larry Wilson and Bob Dreesen of the National Air & Space Museum Library, Smithsonian Institution; Bob Dorr, Norm Taylor and Captain Sue Laramie-Westfall at HQ SAC, Offutt AFB.



▲ 4 ▼ 5







6 ▲ 7 ▼



4. The XB-52 was the second of the two test aircraft to fly, on 2 October 1952, almost five months after the YB-52. Handling and performance proved to be excellent, bearing out the Air Force's faith in the bomber. (Boeing)

5. The Stratofortress's first flight, 15 April 1952. The YB-52 is just lifting off from Boeing Field, Seattle. During the trouble-free sortie it stayed aloft for 2 hours, 15 minutes. (Boeing)

6. One of the prototypes in flight over the scenic Washington state mountains reveals the graceful lines of the aircraft, accentuated by the early blister-type canopy. Pilots who flew from that single front seat were impressed with how much machinery they had under their control. Note that external wingtip fuel tanks have been added, normal for all future models. (USAF)

7. The YB-52 has just touched down at Boeing Field, the wingtips still airborne. The long wings were designed to flex an amazing 18+ feet at each wingtip, a hallmark of every Stratofort built. (USAF)





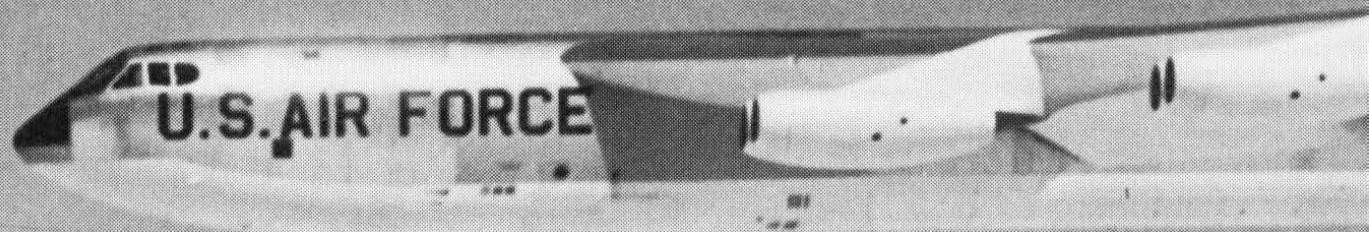


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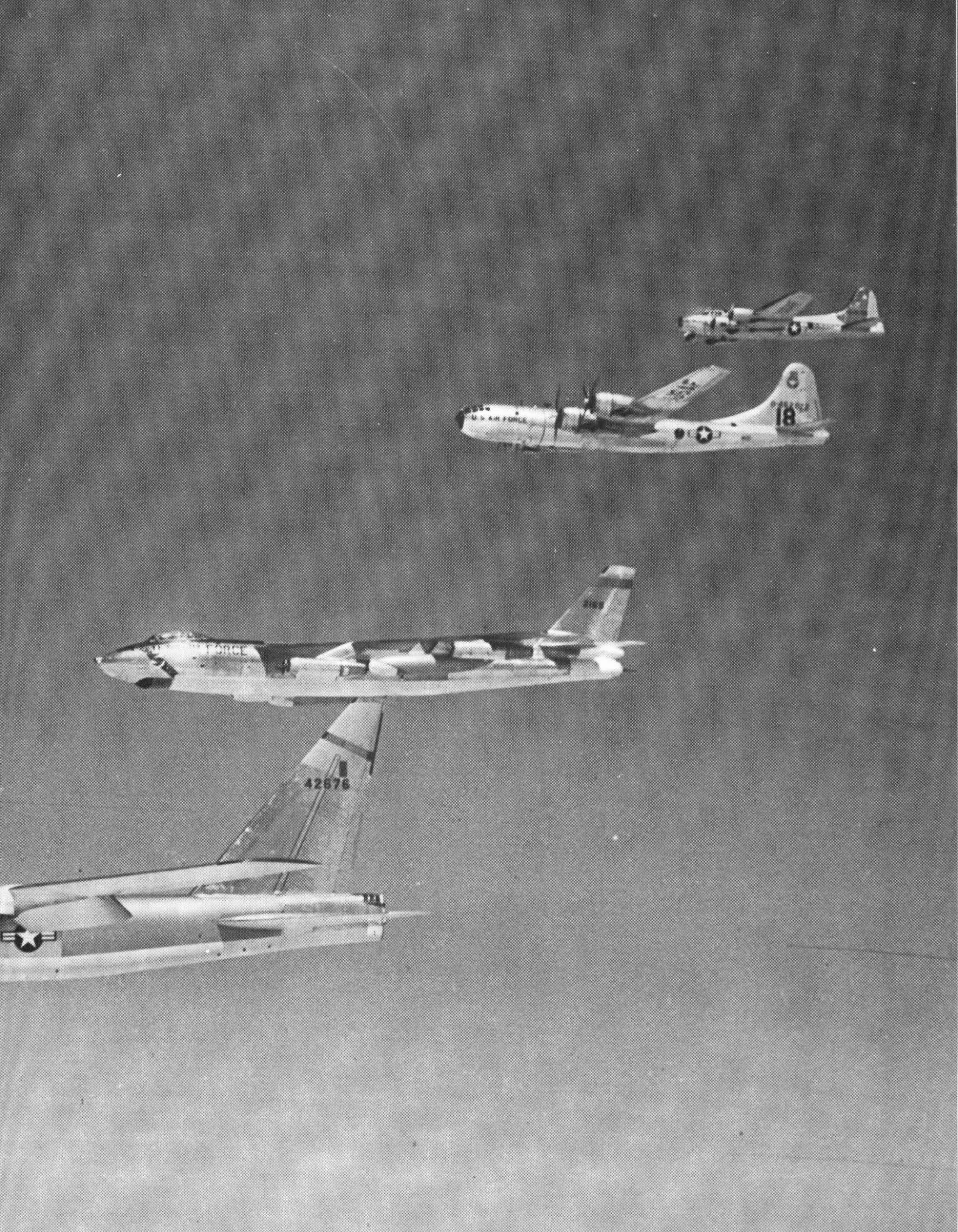
8. The twentieth production Stratofort, a B-52B, was delivered in mid-1955, the year the USAF went operational on the type with the 93rd Bomb Wing, Castle AFB, CA. This basic definitive form would not change until the shorter-tailed G models were produced. (Boeing)

9 ►

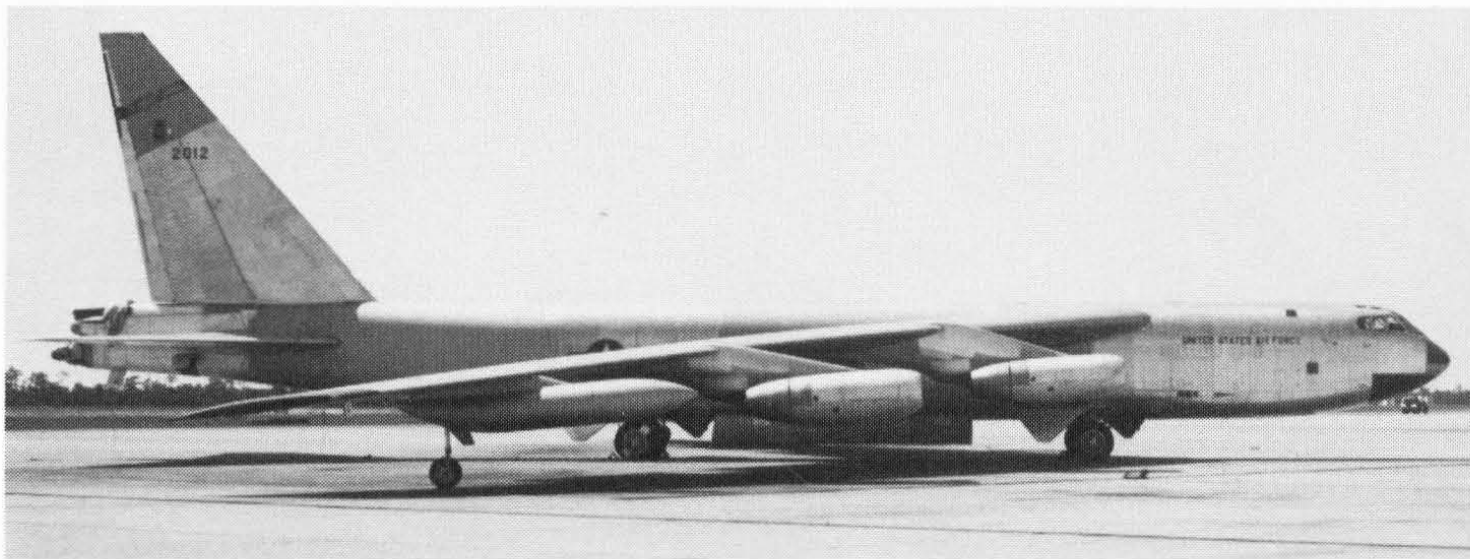
9. This quartet of Boeing bombers spans two decades of development in the B-17, B-29, B-47 and B-52C. The company's products managed to keep certain shapes which came to be identified with either their propeller-driven aircraft's rounded tails or their jets' slim vertical surfaces, thin wings and podded engines. (Boeing)







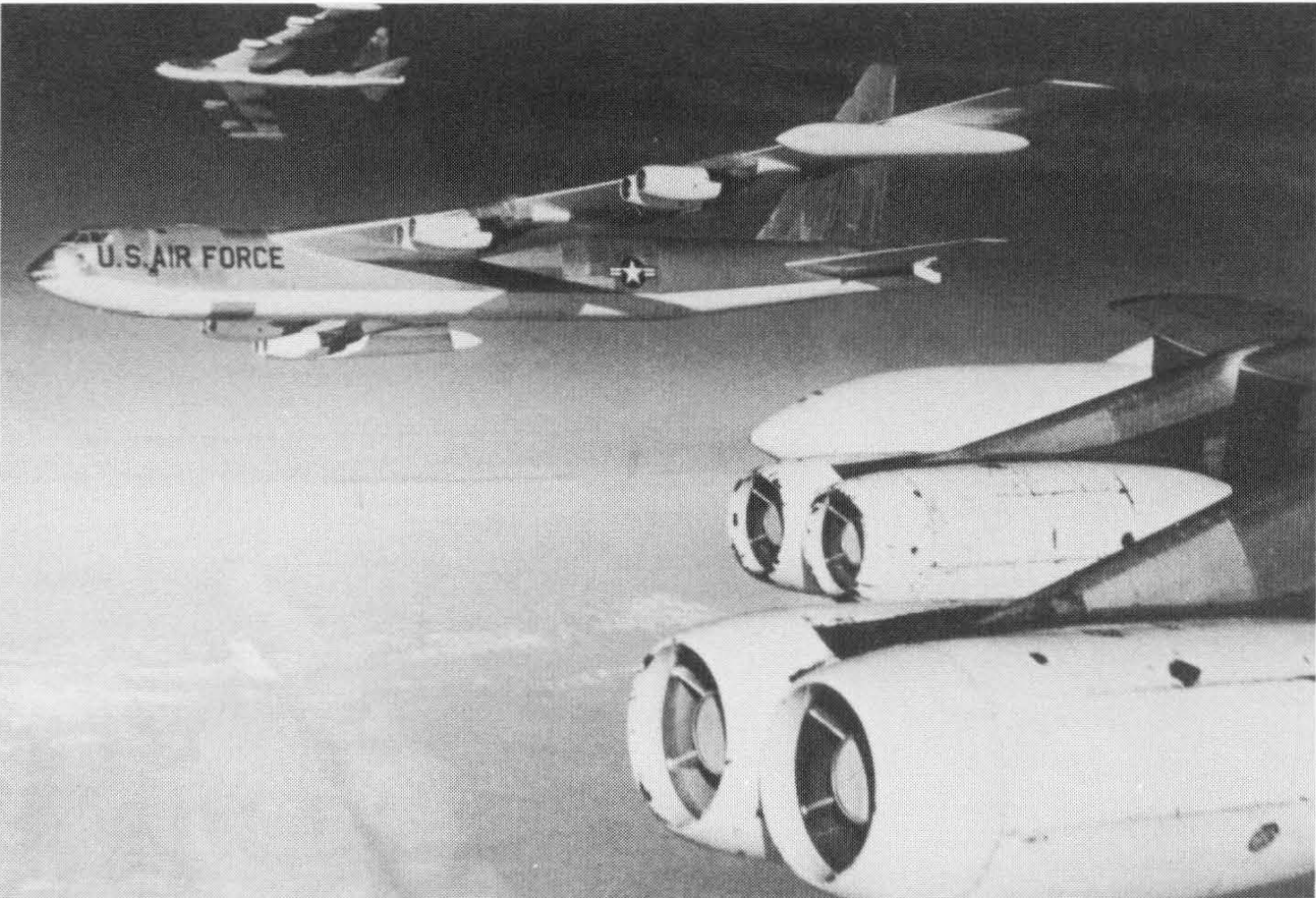




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**10.** This B-52B sits at Eglin AFB, FL for conventional weapons testing. Though considered a secondary capability to nuclear delivery at the time, dropping iron bombs would be heavily utilized later in Southeast Asia. (USAF)

**11.** From the outset, the B-52 was stablemated with the Boeing KC-135 Stratotanker in order to give it the intercontinental range desired by Air Force planners. This made Strategic Air Command (SAC) the premier air arm of the 1950s with the lion's share of the US military budget and a striking power second to none. (NASM)

**12.** Rarely did B-52s fly in tight formation, but they were impressive when they did. New white lower surface anti-nuclear flash paint has been applied along with larger lettering on the nose. The high-altitude characteristics of the bomber were excellent due to the thin, high aspect ratio wing. (NASM)

**13.** A B-52B cruises over northwest USA. With increasing tensions between the West and the Soviet Union, Stratoforts began to sit alert at bases, crews ready for immediate scramble. There was great confidence in SAC commander Curtis LeMay's ability to respond to a nuclear attack. (USAF)

**14.** A B-52B slows down after landing at Boeing Field with the aid of a drogue chute, flaps and wing spoilers, visible above the outboard engine. Though the tandem 'bicycle'-type landing gear took some getting used to, pilots found the aircraft straightforward to land, particularly with its unique crosswind landing gear. (Boeing)

**15.** A B-52B in flight over Eglin AFB with its SAC stablemate, a B-47. As the B-36 was phased-out in the latter 1950s, the Stratofort and Stratojet provided an impressive nuclear punch. Note here the maximum load tests being carried out on the B-52, which has had its lower bomb bay doors and panels removed and replaced with weapon pods. (USAF)

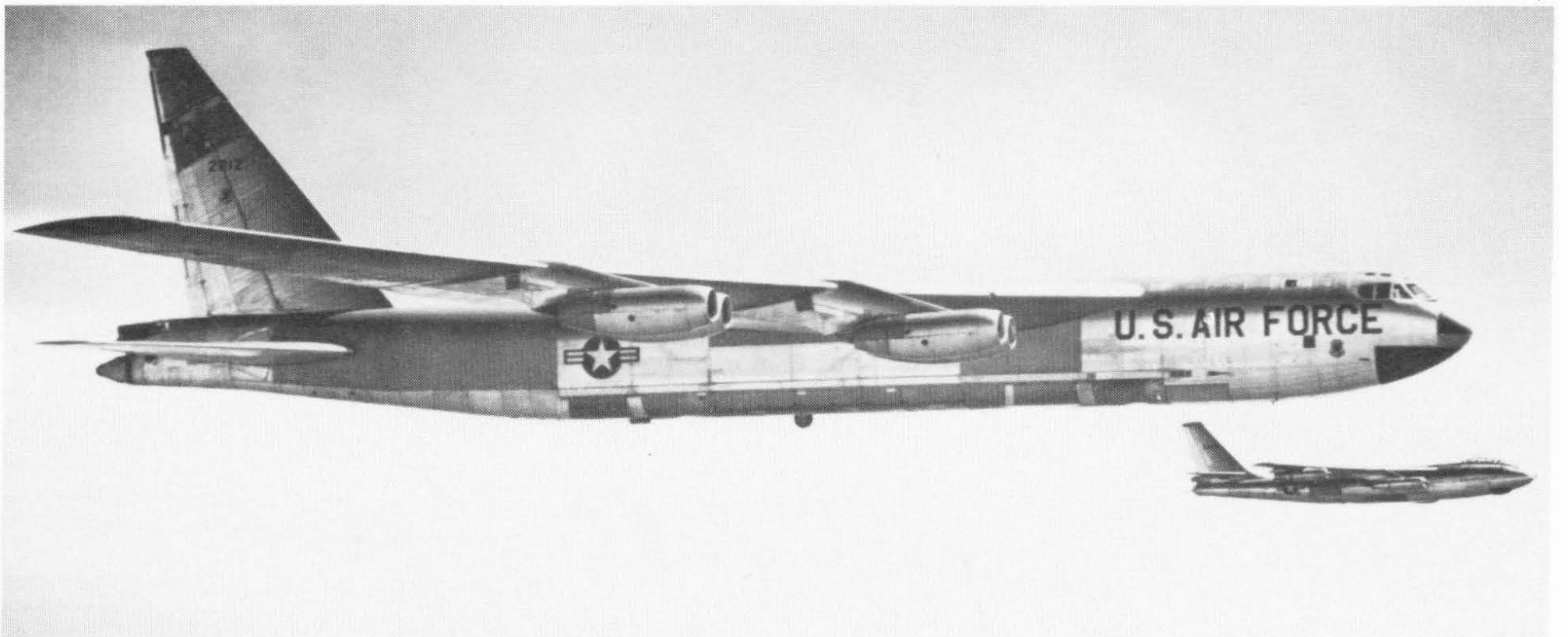




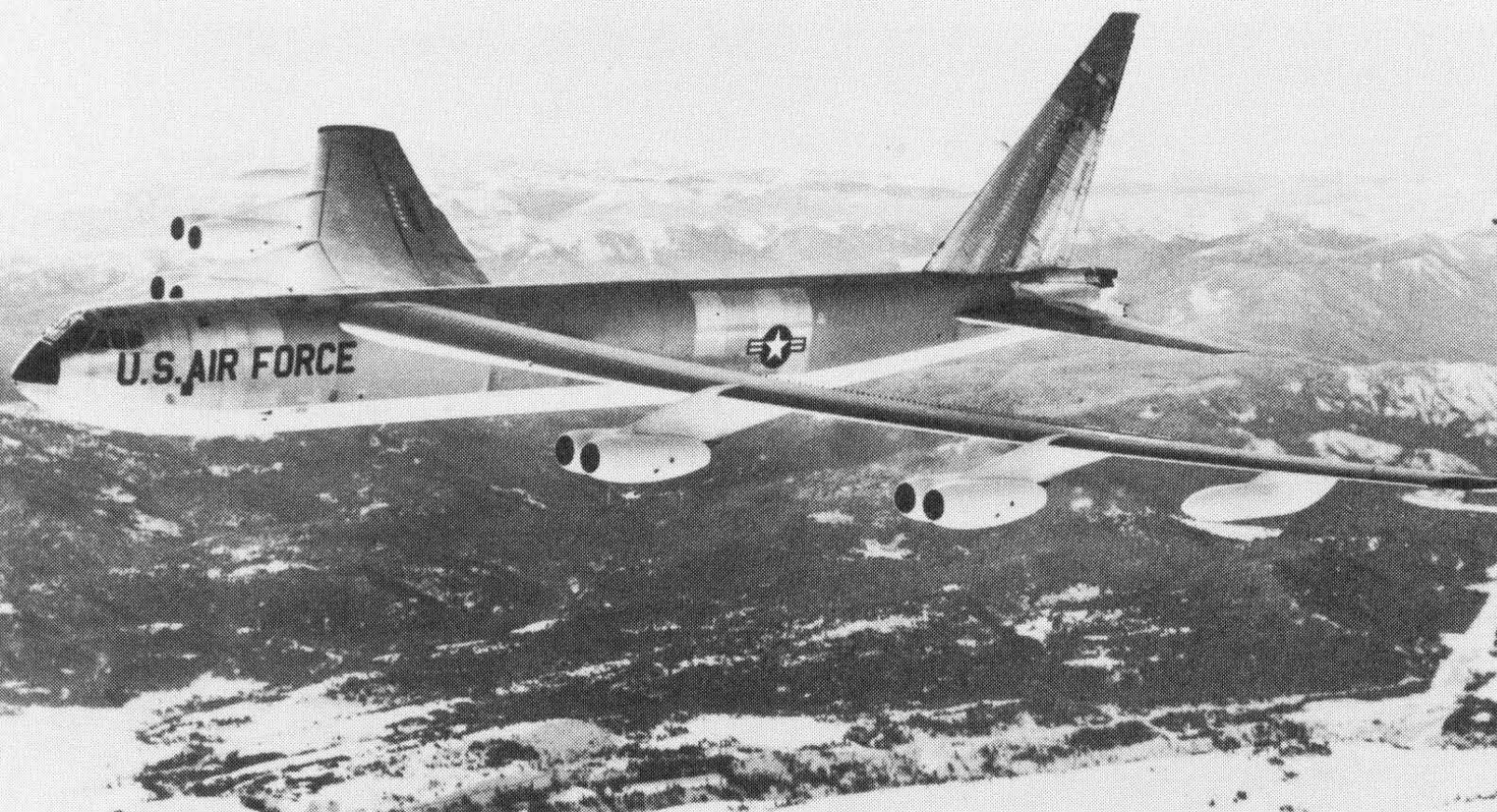
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**16.** This B-52B was among the last of that model delivered in early 1956, having come out of the factory with anti-flash white undersurfaces. At that time SAC still intended to penetrate enemy defences at very high altitude, drop a nuclear weapon, then run for home, trusting the white paint to reflect most of the initial nuclear flash. (USAF)

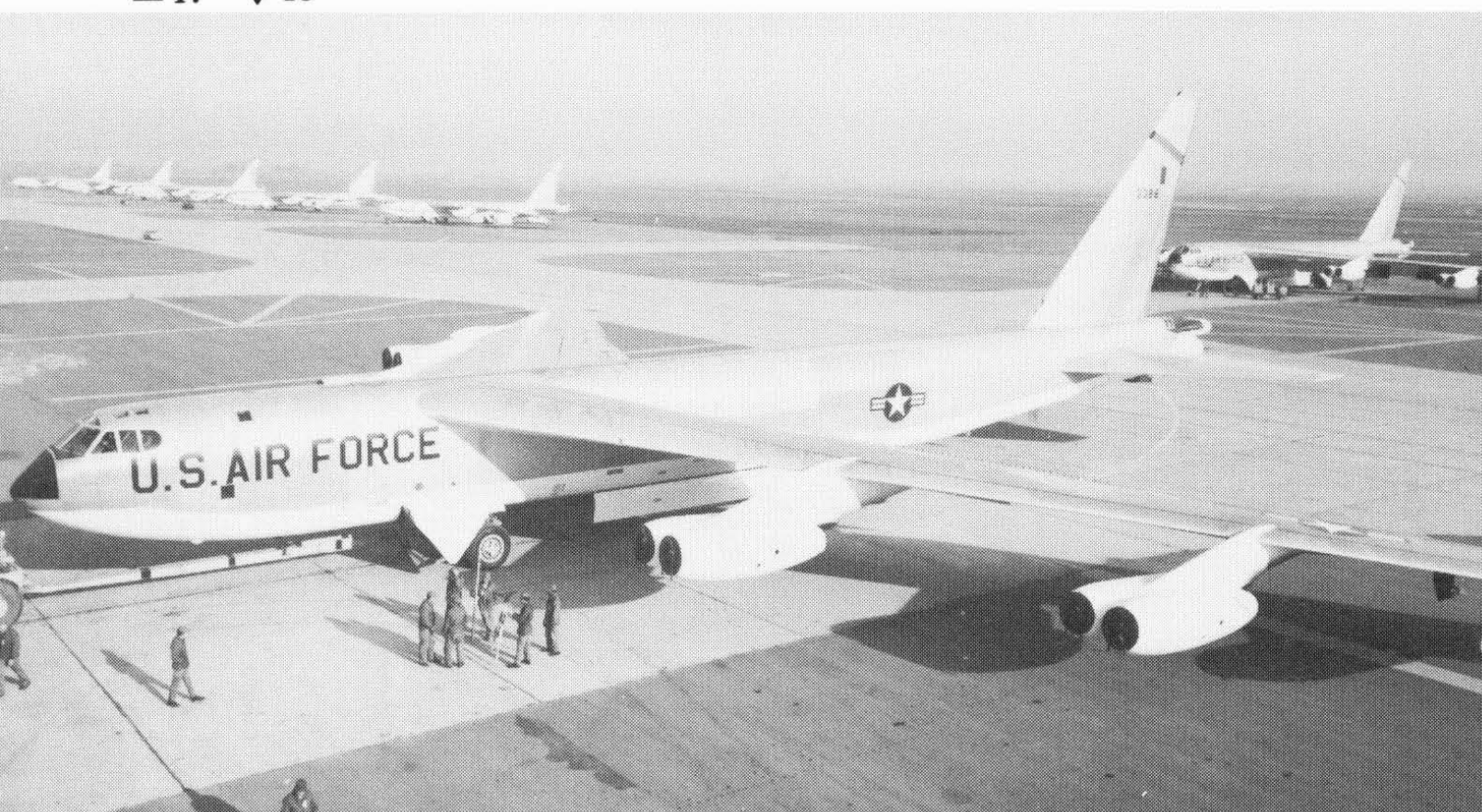


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**17.** A line of new B-52Cs at Boeing Seattle being readied for acceptance flight testing. Delivery of this model began in April 1956 with an increase of 4,000 gallons in fuel capacity over the B and an increase in 30,000lb gross weight, giving the C longer range and increased load capacity. (Boeing)

**18.** B-52Bs of the 93rd Bomb Wing, SAC's first Stratofort unit, at Castle AFB, CA in 1956. One of the problems that showed up immediately involved faulty alternators, a maddening nuisance on long missions that caused flight engineers hours of difficult troubleshooting. (USAF)

**19, 20.** Stratoforts on alert at Loring AFB, Maine, December 1958. The drooping wingtips show that the aircraft are fully fuelled, able to scramble in a few minutes' time. SAC faced a major problem in trying to launch numerous B-52s all within a few minutes. After years of practice under General Curtis LeMay's leadership, it could be done. (USAF)







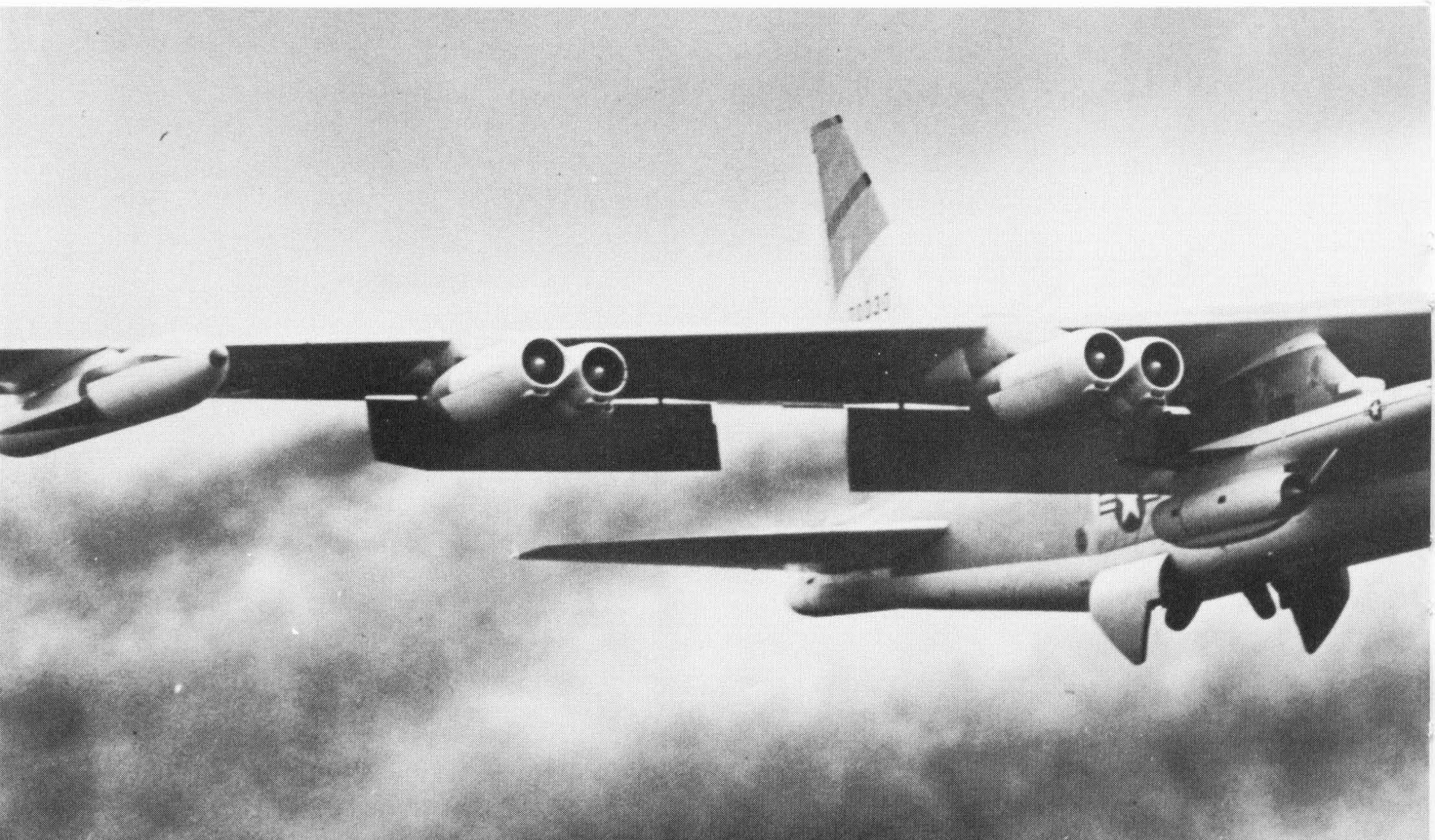
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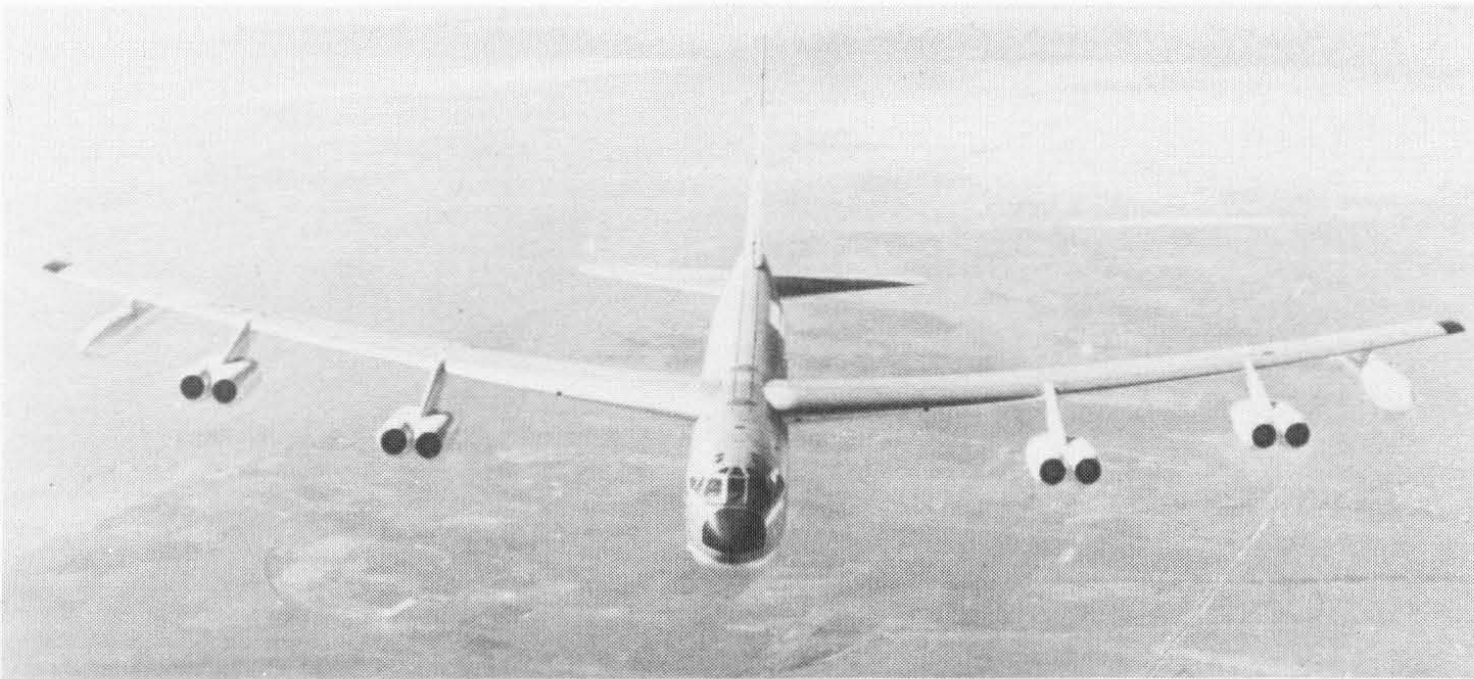
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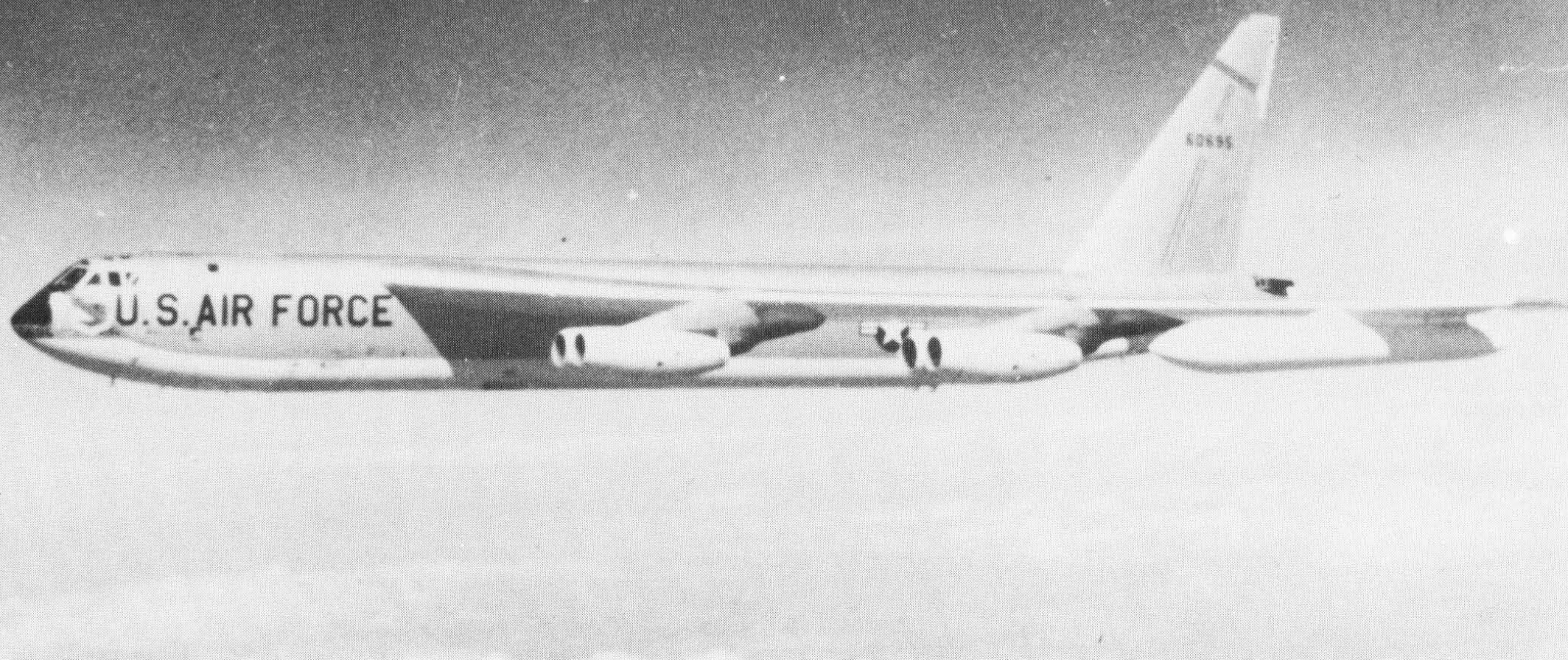
**21.** Prior to the G model, the aircraft's external 1,500gall fuel tanks were jettisonable, adding significantly to the B-52's range. In the background on the Boeing Seattle ramp in the autumn of 1956 are a group of new Bs and a single C at the far right. (Boeing)

**22.** By the late 1950s the increased effectiveness of Soviet missile defences forced SAC to bring its Stratoforts down to low level for penetration something never envisaged in the aircraft's design. These B-52s are making a low-level run on the ranges north of Nellis AFB, Nevada in April 1959. (USAF)

**23.** By any standard the B-52 was graceful in flight as its wings arced up in lift. Disconcerting for pilots was the sight of the tips flexing and each engine pod moving in a different direction when flying through even the lightest turbulence. (USAF)

**24.** Blasting into the air at Seattle is a B-52F, the final model produced by Boeing's Washington state plant. With this version the alternator problems were solved and air-to-ground AGM-28/GAM-77 Hound Dog missiles were carried on the inner wing pylons. With a speed of 1,200mph and a range of 500 miles, the missile extended the B-52's capabilities significantly. (Boeing)





▲ 25

25. A B-52D on airborne alert. During the Cuban Missile Crisis in 1962, B-52s were placed on airborne alert, staggered so that several were in flight at any one time 24 hours a day carrying

their nuclear bomb loads. So exhausting and expensive was the practice that it was discontinued. (Baker via Horne)

▼ 26

26. B-52D production at Boeing Wichita, Kansas. The two prototypes, together with the A to F models, were built in Seattle while production continued at Wichita from the D

to the H until early 1961. Note the main landing gear trucks rest in floor recesses, and new B-47s are being put together in the background. (Boeing)







27 ▲ 28 ▼

**27.** Mating the forward fuselage section to the massive wing carry-through structure. More than twenty subcontractors throughout the USA built major sub-assemblies for the B-52 until, by the time the E model appeared, 56.7 per cent by weight of each Stratofort came from other airframe builders such as Cessna and Fairchild. (Boeing)

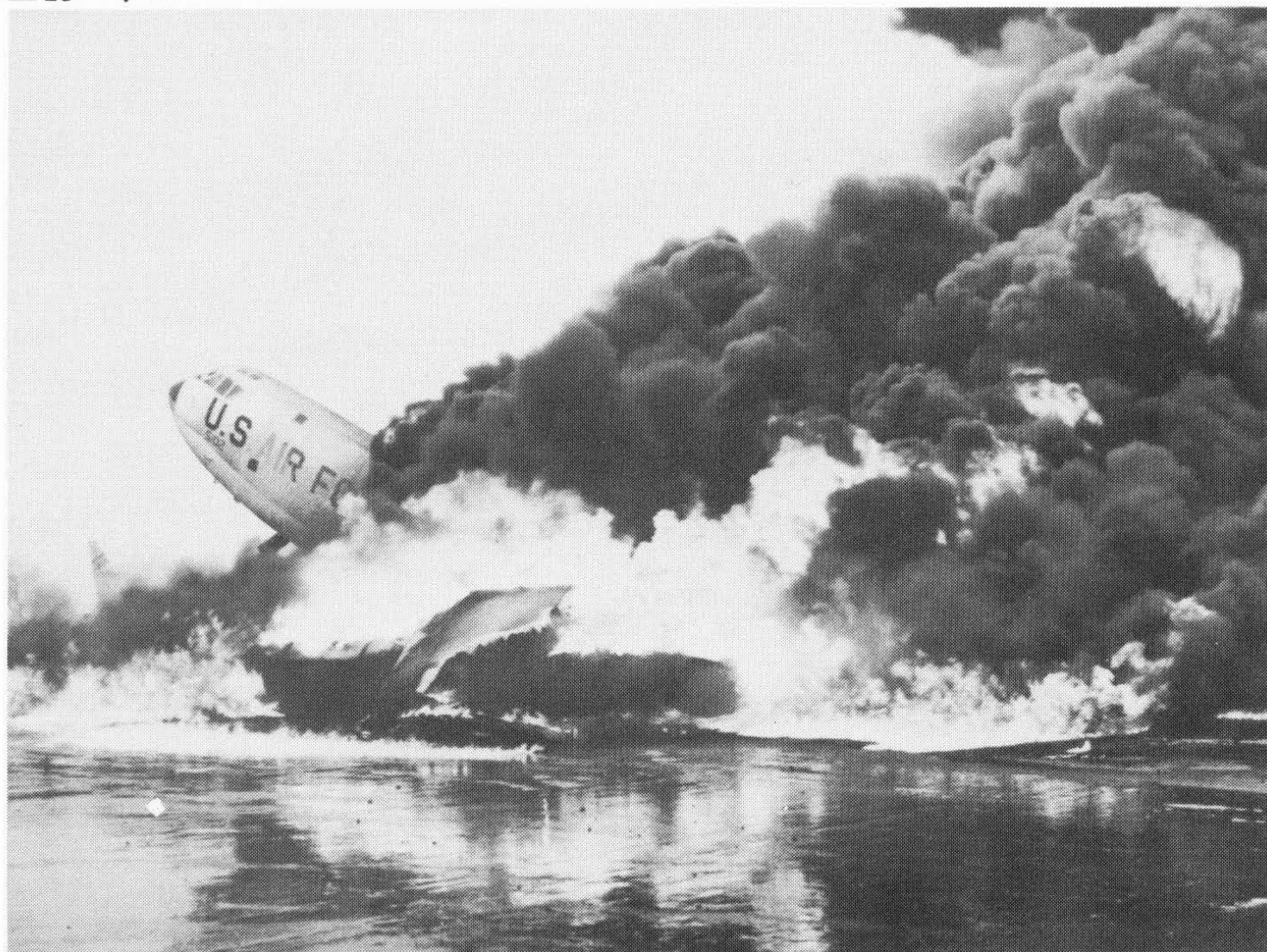
**28.** The pre-flight line at Boeing Seattle crowded with new B-52Es. Regardless of condition, each aircraft was rolled out of the factory at a scheduled hour and the remaining work was completed outside, which explains the often dishevelled appearance of new bombers in those years. (Boeing)







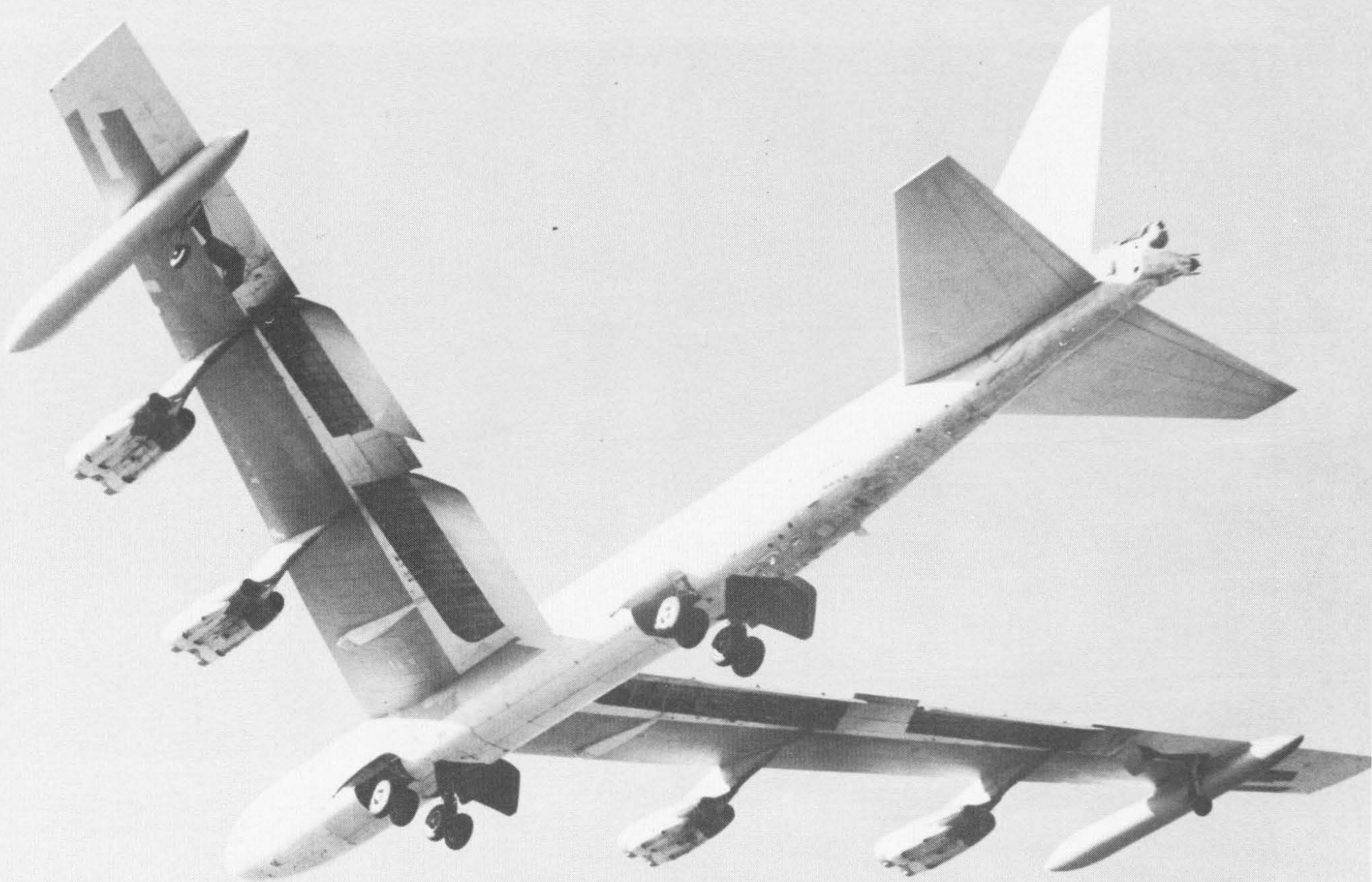
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**29.** The first Wichita-built B-52D made its first flight on 14 May 1956 and was delivered to Castle AFB on 26 June. This model was very little changed from the C except for a few minor internal differences. (Boeing)

**30.** There is a massive amount of fuel in the B-52, even upon landing, a hazard only too evident from the results of this crash landing at Loring AFB. Pilots of what came to be nicknamed the BUFF (Big, Ugly Fat Fellow) had to manage rather than fly the aircraft if they were to utilize it properly. (USAF)

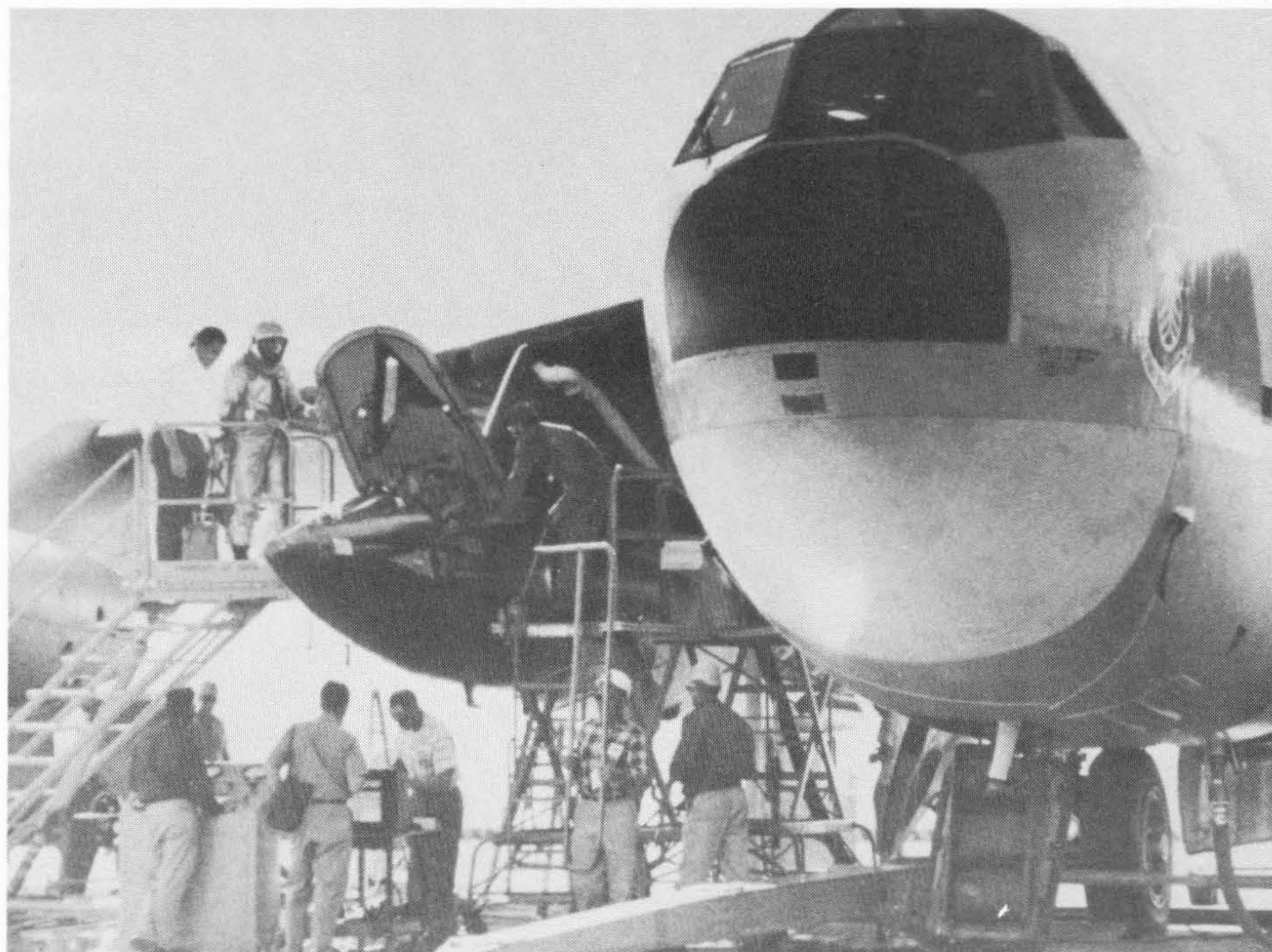




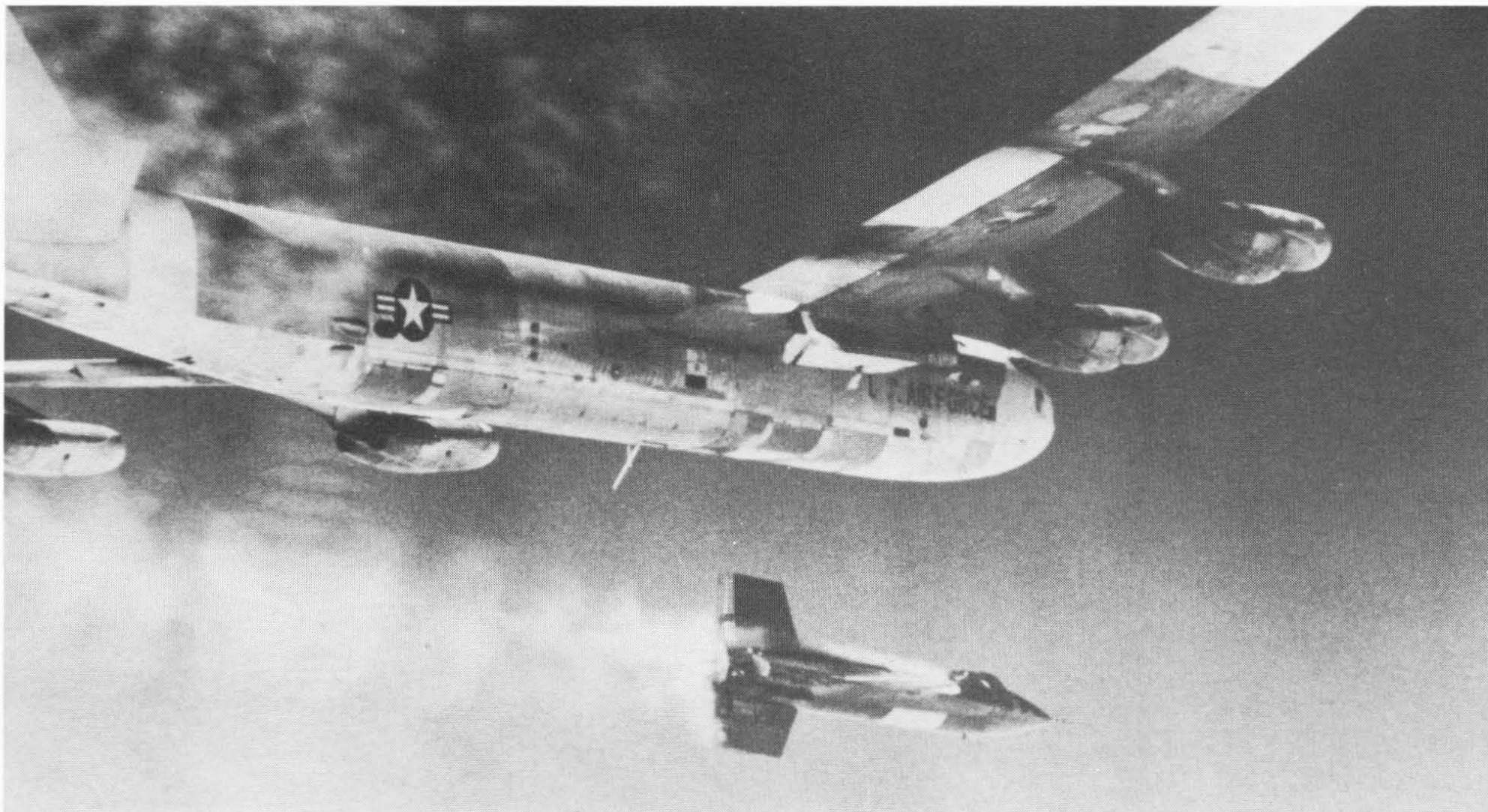
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**31.** A B-52F on finals with gear and flaps down. Since the wing could not be lowered to counter a crosswind, the gear trucks could be angled to match the bomber's crab into the wind and still remain wings level on touch down. Pilots found looking out of the side windows on landing a novel experience. (Boeing)

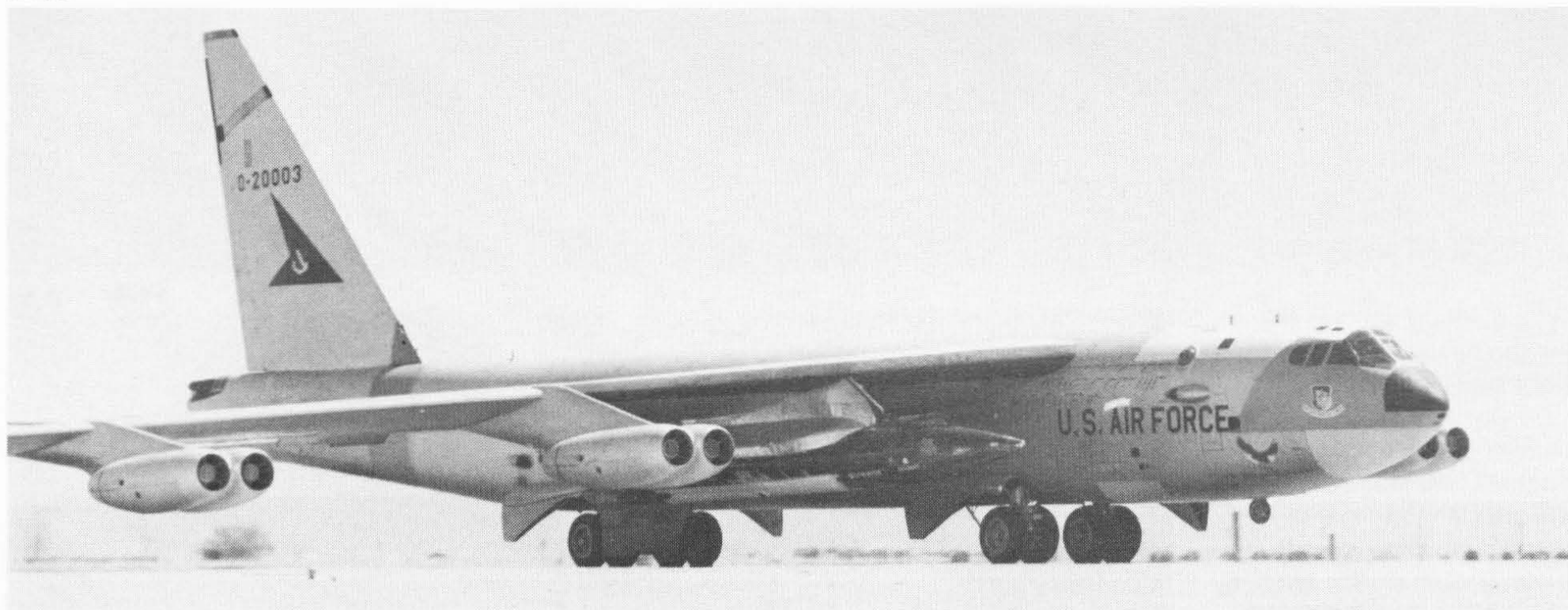
**32.** One of the more well-known uses of the B-52 has been the dropping of advanced research aircraft over Edwards AFB, CA. The most famous of these aircraft was the X-15, here mated to its B-52A and about to be manned. (NASM)



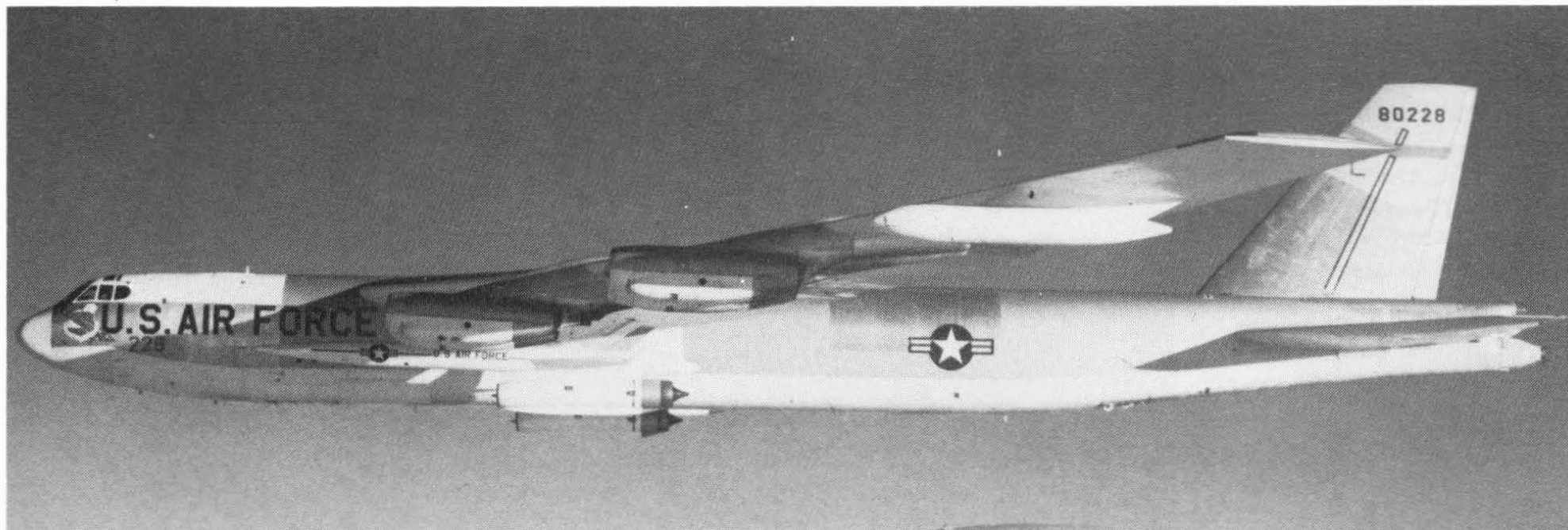




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**33.** The X-15 upon release from the B-52A mothership. The remarkable North American rocket plane topped 354,200 feet and reached a speed of Mach 6.73 or 4,534mph during the 1960s. (NASM)

**34.** The B-52A rumbles down the Edwards runway with its captive X-15. Note the record of drops painted on the side of the Stratofort's nose and the black coating on the leading edge of the wing to protect from the X-15's rocket blast. (Boeing)

**35.** With the B-52G came some major changes in the aircraft's design. The tail was shortened, gross weight went up from 450,000lb to 488,000lb, fuel capacity went up to 47,975lb and range increased accordingly to 7,570 nautical miles unrefuelled. (USAF)

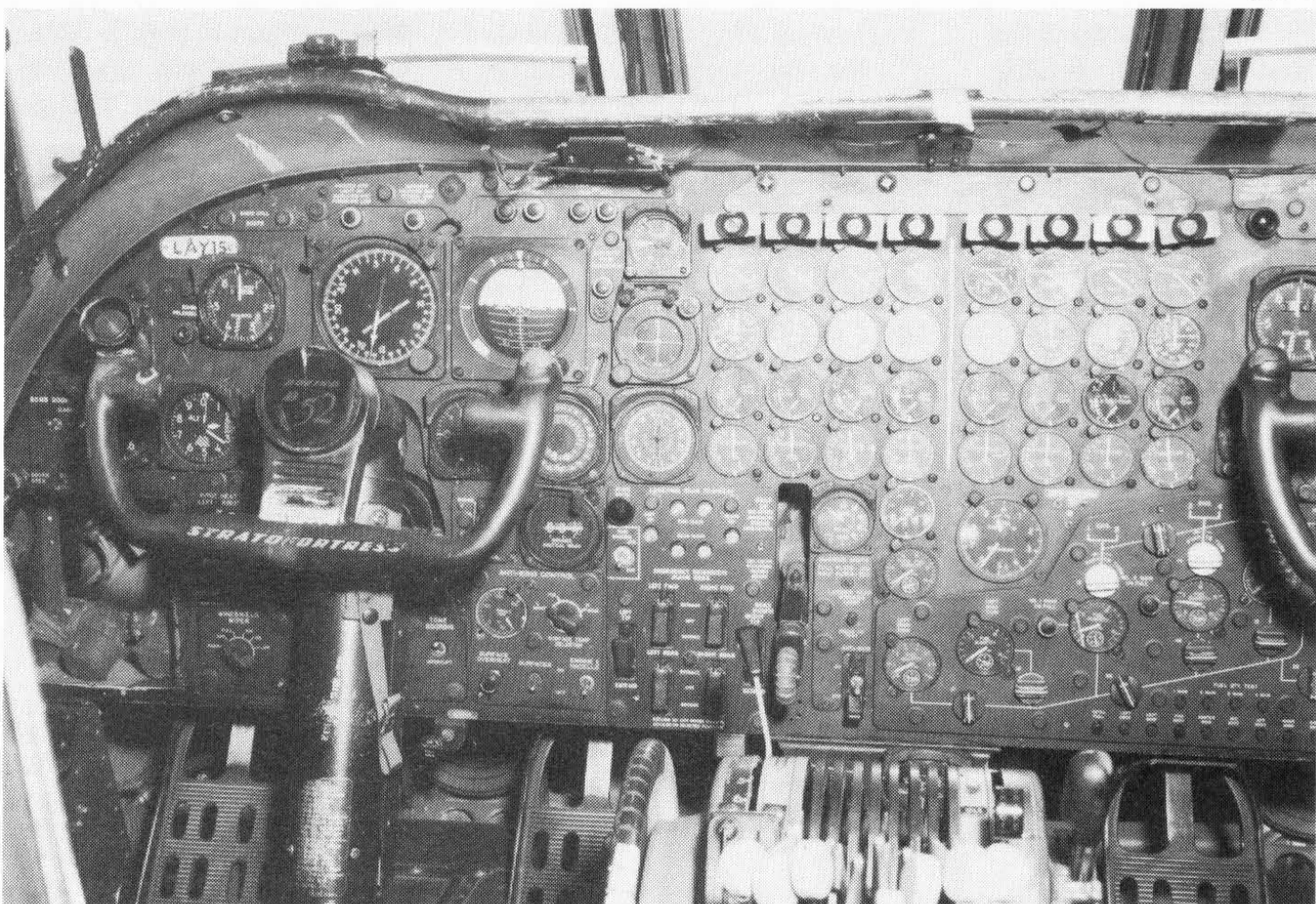
**36.** The fourth B-52G built undergoes test refuelling with a KC-135A to determine handling characteristics and differences from previous models, particularly relating to roll feel. The G was the first model to have its ailerons replaced by spoilers. Though the aircraft had to be anticipated in turns and shuddered uncomfortably, pilots found it just another characteristic to get used to. (Boeing)

**37.** The cockpit of a B-52B photographed in March 1966. Most of the gauges deal with the eight engines while flight instrumentation is very straightforward. Pilots have found that the aircraft's size makes little difference in flying. (USAF)

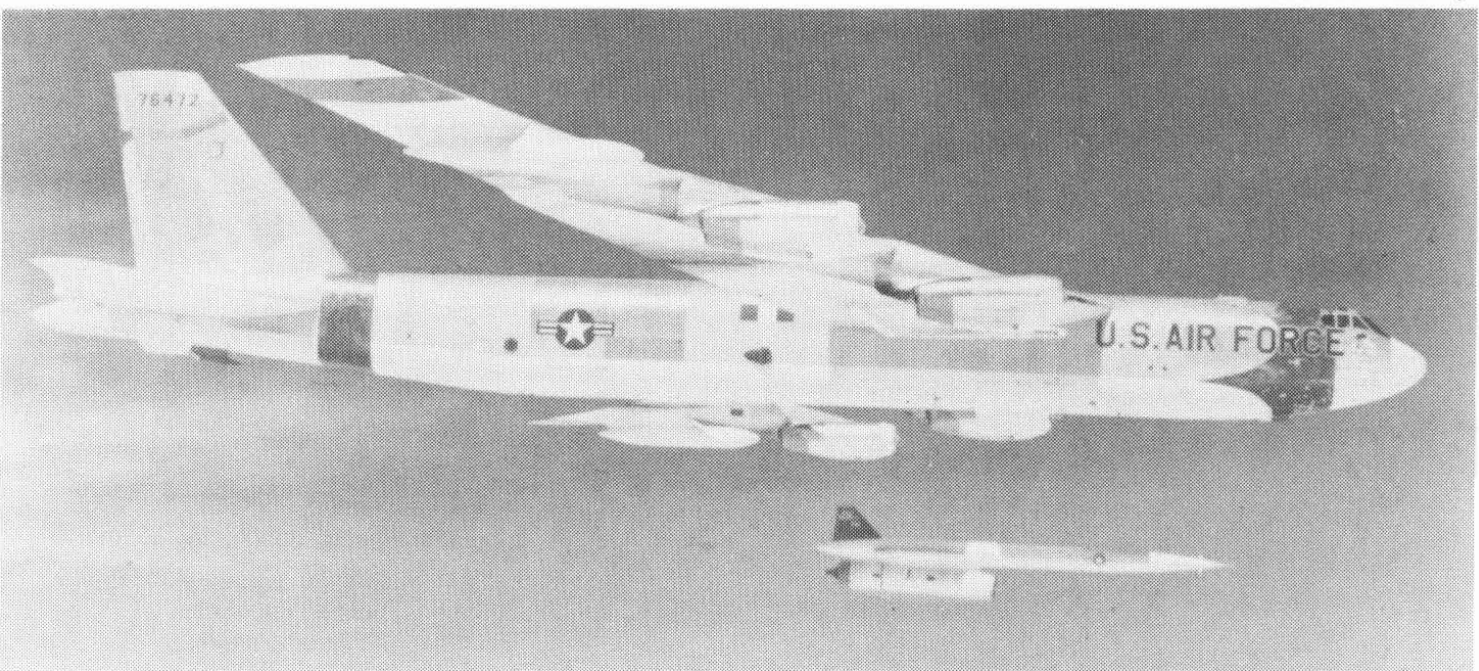
**38.** A Hound Dog is released near Eglin AFB from a B-52G in 1962. This predecessor of the cruise missile not only carried a one megaton warhead, but its engines could be used for additional thrust when attached to the wing pylon, then the missile's tanks could be refilled from the B-52's fuel supply. (USAF)



36 ▲



37 ▲ 38 ▼







▲ 39

39. The final model of the Stratofort was the B-52H, different in having 17,000lb thrust TF33 turbofan engines which gave more power without having to use water for full

take-off thrust. As with the G, the rear-gunner sat up front, but the H had a 20mm Vulcan Gatling cannon in the tail instead of the four .50in machine-guns. (USAF)

40. Crews run to their B-52Bs at March AFB, CA in June 1965 during a practice alert. Though SAC prided itself on quick reaction times, alert crews lived isolated in self-contained

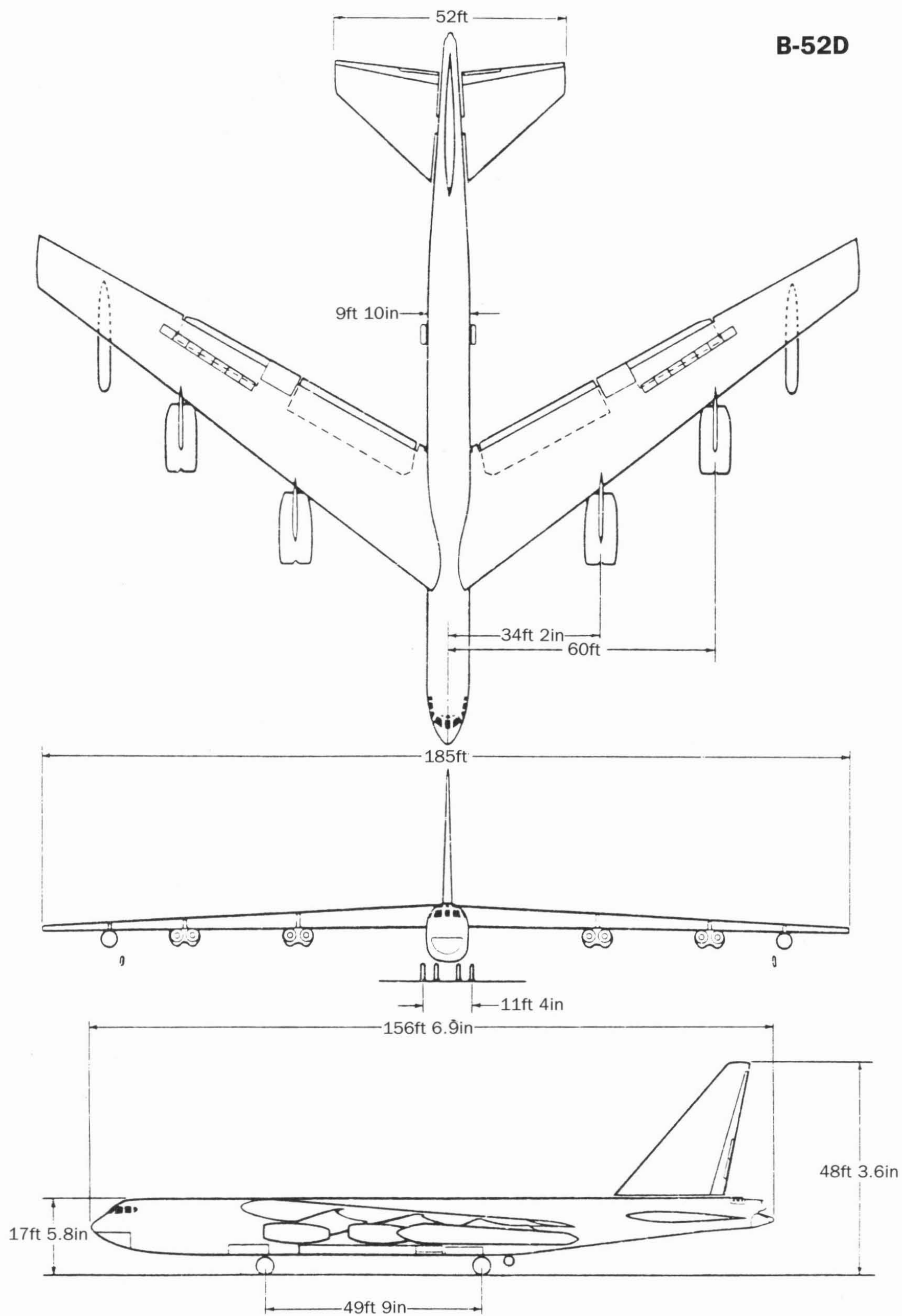
shelters without family contact as if they were overseas. Later family visits were allowed to boost morale. (Boeing)

▼ 40





**B-52D**



**B-52 STRATOFORTRESS**



## **XB-52**

First flight: 2 October 1952  
Number built: one – AF Serial No. 49-230 (Boeing Seattle)  
Engines: four J57-P-8 10,000lb thrust; two J75 15,000lb thrust  
Empty weight: 155,000lb  
Gross weight: 390,000lb  
Fuel capacity: 38,865 US gall  
Range: 6,140nm unrefuelled  
Speed: 650mph  
Military load: 10,000lb  
Ceiling: 50,000ft+  
Armament: N/A  
Wingspan: 185ft  
Length: 152.7ft  
Height: 48.25ft  
Crew: 3

## **YB-52**

First flight: 15 April 1952  
Number built: one – AF Serial No. 49-231 (Boeing Seattle)  
Engines: eight YJ57-P-3 8,700lb thrust each  
Empty weight: 155,000lb  
Gross weight: 390,000lb  
Fuel capacity: 38,865US gall  
Range: 6,140nm unrefuelled  
Speed: 650mph  
Military load: 10,000lb  
Ceiling: 50,000ft+  
Armament: N/A  
Wingspan: 185ft  
Length: 152.7ft  
Height: 48.25ft  
Crew: 3

## **B-52A**

First flight: 5 August 1954  
Number built: three – AF Serial Nos. 52-001 to 003 (Boeing Seattle)  
Engines: eight J57-P-1W 10,000lb thrust dry, 11,000lb wet  
Empty weight: 172,285lb  
Gross weight: 420,000lb  
Fuel capacity: 37,550US gall  
Range: 6,220nm unrefuelled  
Speed: 650mph  
Military load: 34,000lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft

Height: 48.25ft  
Crew: 6

## **B-52B**

First flight: 25 January 1955  
Number built: fifty – AF Serial Nos. 52-004 to 013; 52-8710 to 8716; 53-366 to 398 (Boeing Seattle)  
Engines: eight J57-P-1WA (10,000lb thrust dry, 11,000lb wet); 1WB (10,400lb dry, 11,400lb wet); 29W; 29WA; 19W (10,500lb dry, 12,100lb wet)  
Empty weight: 172,285lb to 177,832lb  
Gross weight: 420,000lb  
Fuel capacity: 37,550lb  
Range: 6,220nm unrefuelled  
Speed: 650mph  
Military load: 63,000lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft  
Height: 48.25ft  
Crew: 6

## **B-52C**

First flight: 9 March 1956  
Number built: thirty-five – AF Serial Nos. 53-399 to 408; 54-2664 2688 (Boeing Seattle)  
Engines: eight J57-P-29WA; -19W 10,500lb thrust dry, 12,100lb wet  
Empty weight: 172,637lb to 179,390lb  
Gross weight: 450,000lb  
Fuel capacity: 41,550US gall  
Range: 6,610nm unrefuelled  
Speed: 650mph  
Military load: 64,000lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft  
Height: 48.25ft  
Crew: 6

## **B-52D**

First flight: 14 May 1956  
Number built: 170 – AF Serial Nos. 55-068 to 117; 55-580 to 630 (Boeing Seattle);

55-049 to 067; 55-673 to 680; 56-657 to 698 (Boeing Wichita)  
Engines: eight J57-P-29W; -19W 10,500lb thrust dry, 12,100lb wet  
Empty weight: 170,126lb to 180,811lb  
Gross weight: 450,000lb  
Fuel capacity: 41,550lb  
Range: 6,610nm unrefuelled  
Speed: 650mph  
Military load: 64,000lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft  
Height: 48.25ft  
Crew: 6

## **B-52E**

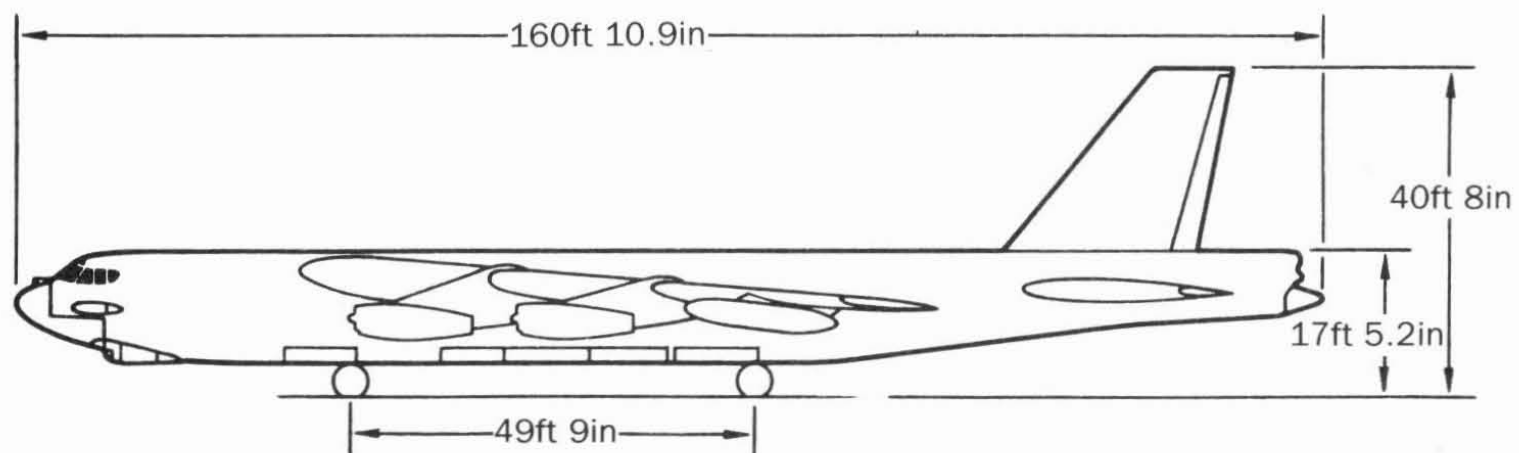
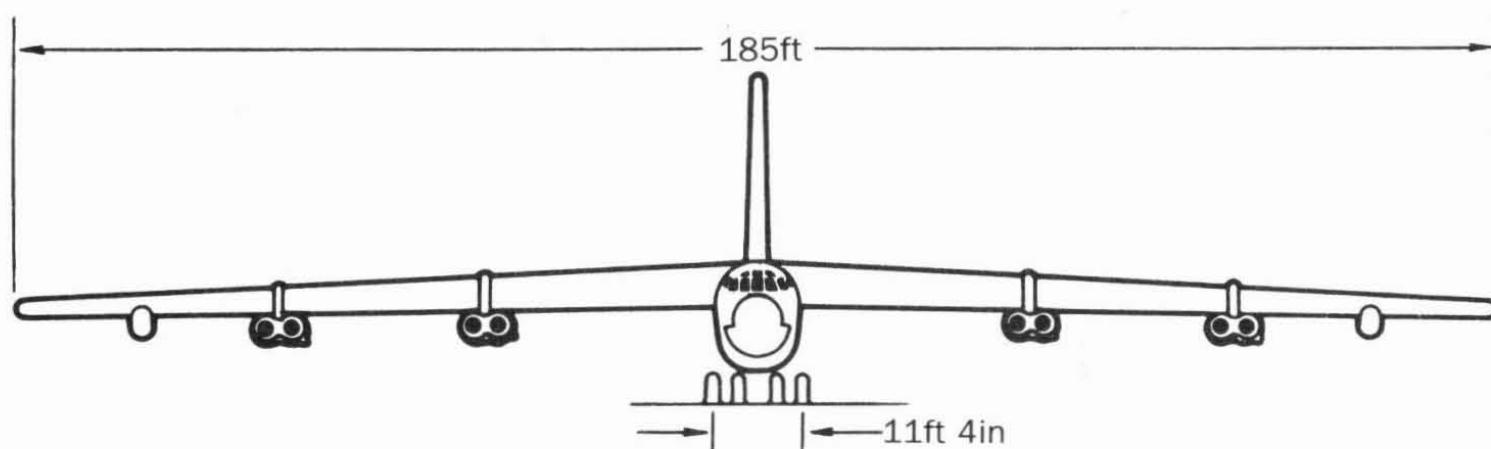
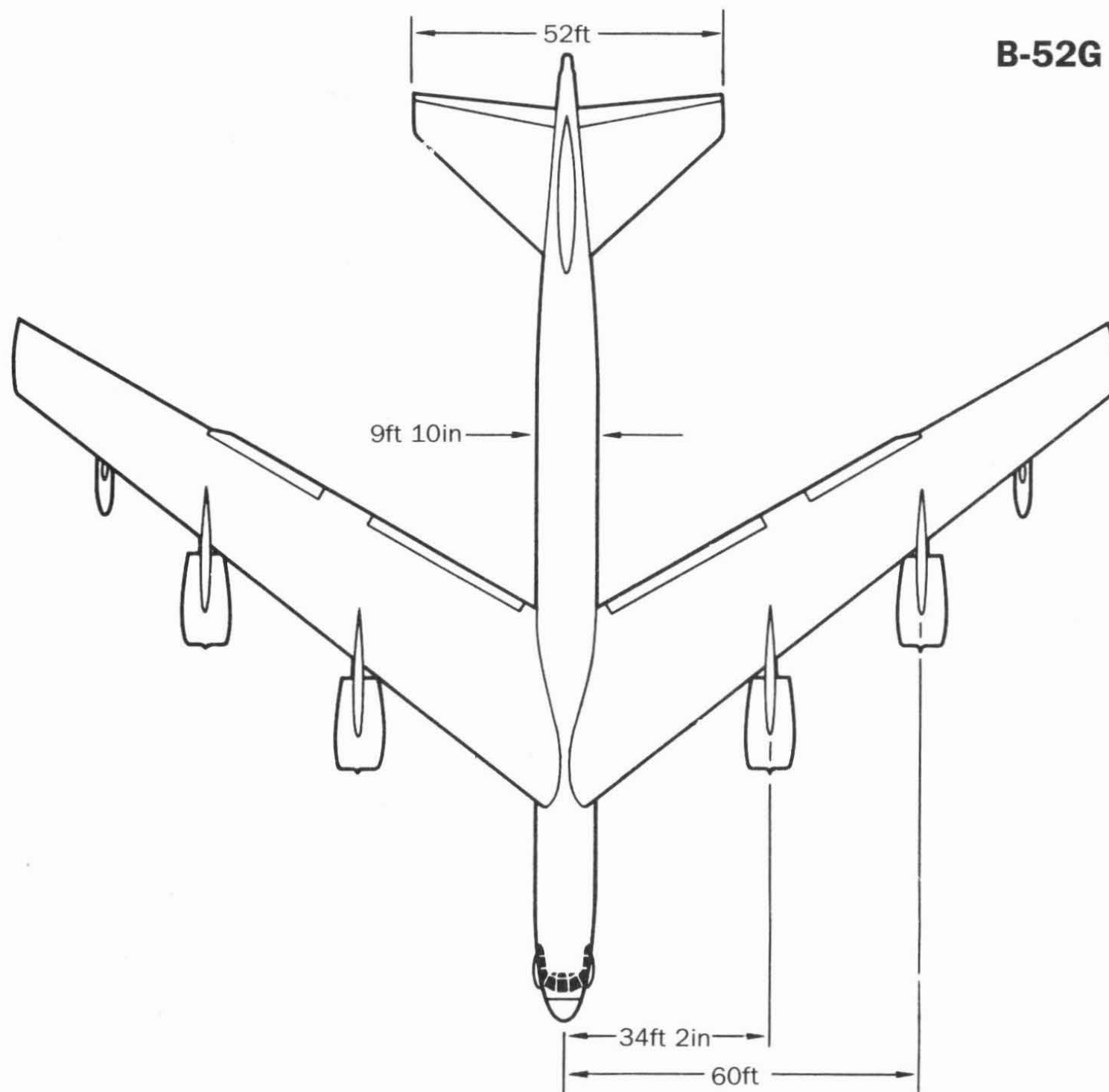
First flight: 3 October 1957  
Number built: 100 – AF Serial Nos. 56-631 to 656; 57-014 to 029 (Boeing Seattle); 56-699 to 712; 57-095 to 138 (Boeing Wichita)  
Engines: eight J57-P-29W; -29WA; 19W 10,500lb thrust dry, 12,100lb wet  
Empty weight: 172,720lb to 177,690lb  
Gross weight: 450,000lb  
Fuel capacity: 41,550US gall  
Range: 6,640nm unrefuelled  
Speed: 650mph  
Military load: 65,000lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft  
Height: 48.25ft  
Crew: 6

## **B-52F**

First flight: 6 May 1958  
Number built: 89 – AF Serial Nos. 57-030 to 073 (Boeing Seattle); 57-139 to 183 (Boeing Wichita)  
Engines: eight J57-P-43W; -43WA; -43WB 11,200lb thrust dry, 13,750lb wet  
Empty weight: 170,158lb to 174,665lb  
Gross weight: 450,000lb  
Fuel capacity: 41,550US gall  
Range: 6,690nm unrefuelled  
Speed: 650mph  
Military load: 65,000lb



**B-52G**



**B-52 STRATOFORTRESS**



Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 156.6ft  
Height: 48.25ft  
Crew: 6

## B-52G

First flight: 27 October 1958  
Number built: 193 – AF Serial Nos.  
57-6468 to 6520; 58-158  
to 258; 59-2564 to 2602  
(Boeing Wichita)  
Engines: eight J57-P-43WB  
11,200lb thrust dry,  
13,750lb wet  
Empty weight: 158,737lb to 172,066lb

Gross weight: 488,000lb  
Fuel capacity: 47,975US gall  
Range: 7,570nm unrefuelled  
Speed: 650mph  
Military load: 104,900lb  
Ceiling: 50,000ft+  
Armament: four .50in machine-guns  
Wingspan: 185ft  
Length: 157.6ft  
Height: 40.65ft  
Crew: 6

## B-52H

First flight: 16 March 1961  
Number built: 102 – AF Serial Nos.  
60-001 to 062; 61-001 to  
040 (Boeing Wichita)

Engines: eight TF33-P-3 17,000lb  
thrust  
Empty weight: 165,988lb to 175,685lb  
Gross weight: 488,000lb  
Fuel capacity: 47,975 to 48,030US  
gall  
Range: 9,020nm unrefuelled  
Speed: 650mph  
Military load: 105,200lb  
Ceiling: 50,000ft+  
Armament: 20mm gatling cannon  
Wingspan: 185ft  
Length: 156ft  
Height: 40.65ft  
Crew: 6

The last of 744 Stratofortresses built, a B-52H, was delivered to the USAF on 26 October 1962.



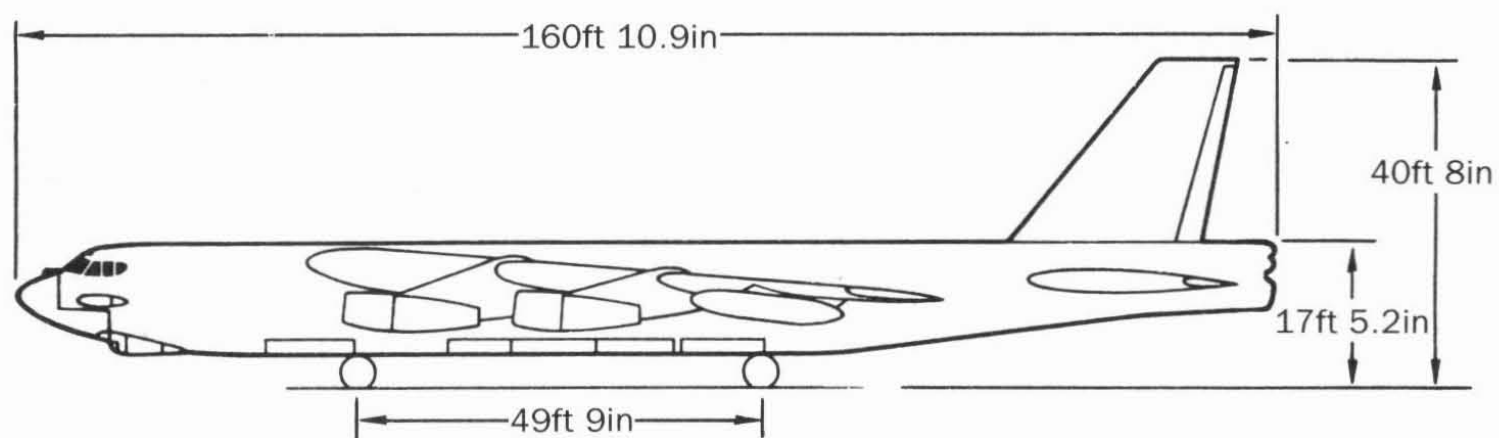
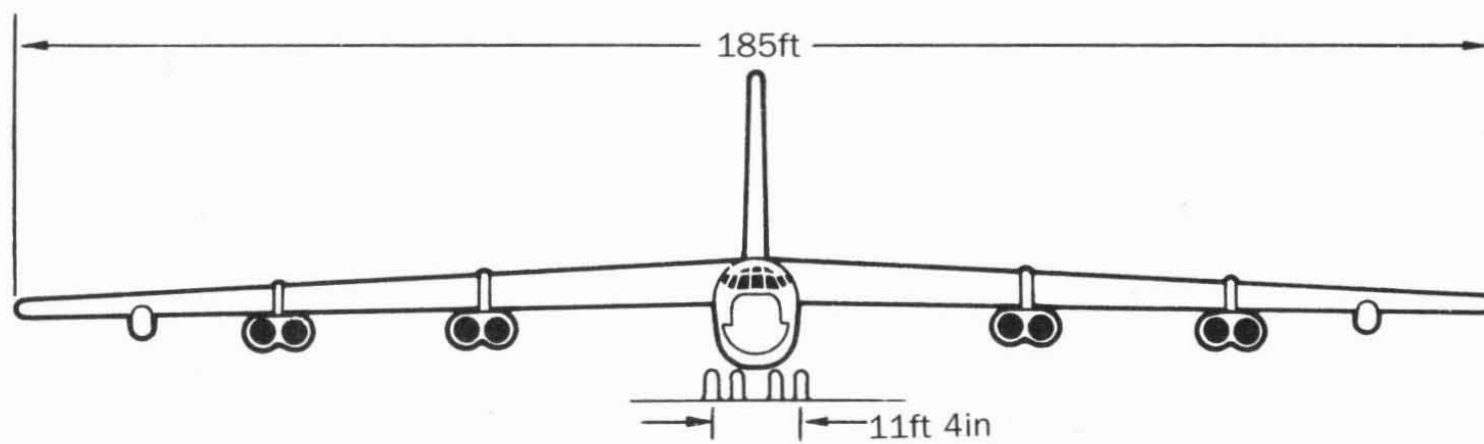
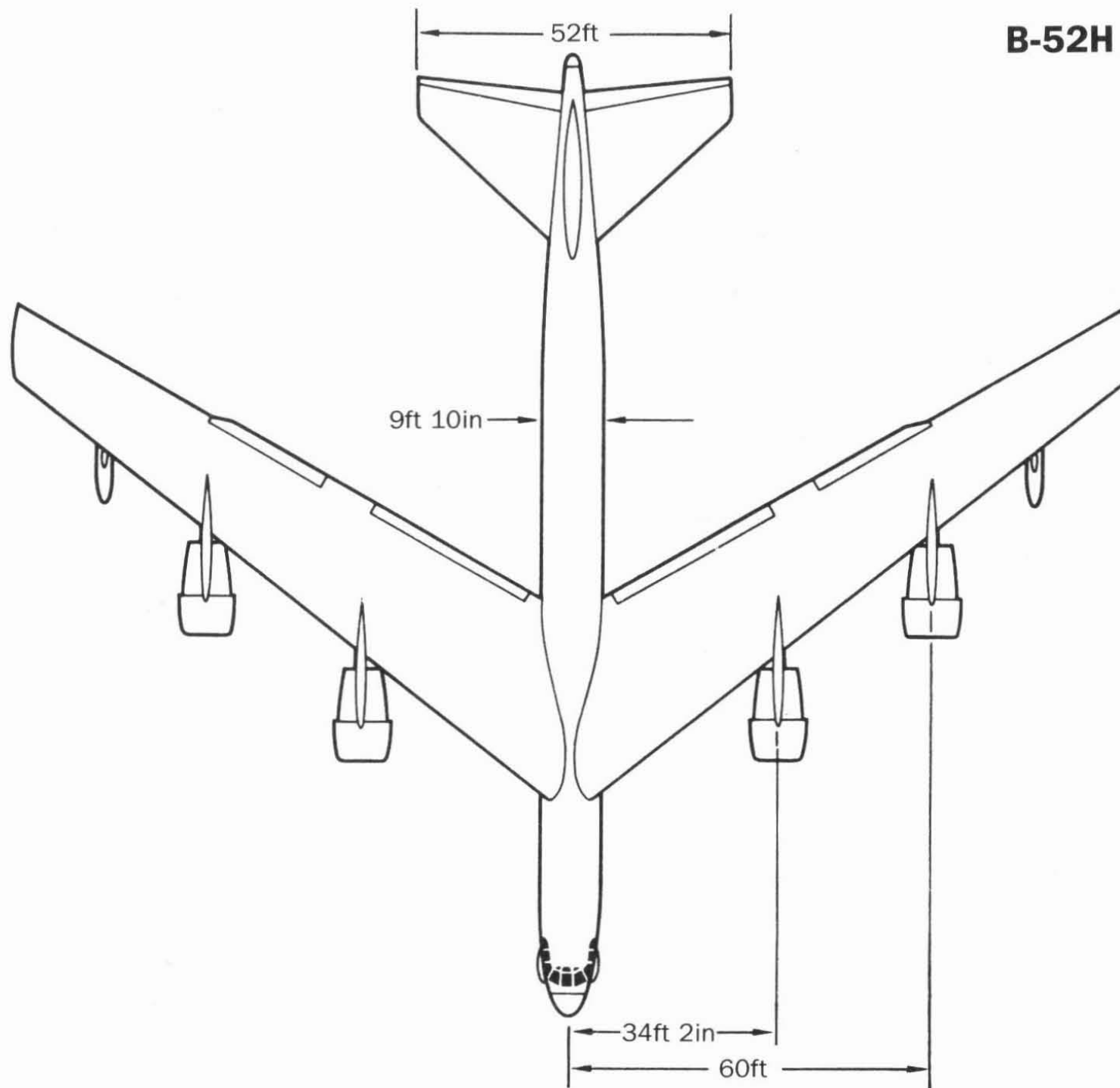
41. Though the B-52G's external fuel tanks were smaller at 700 gallons and could not be

jettisoned, an increased fuel capacity due to wet wings gave the model increased range. A

one-piece radome also replaced the previous two-part arrangement. (Boeing)

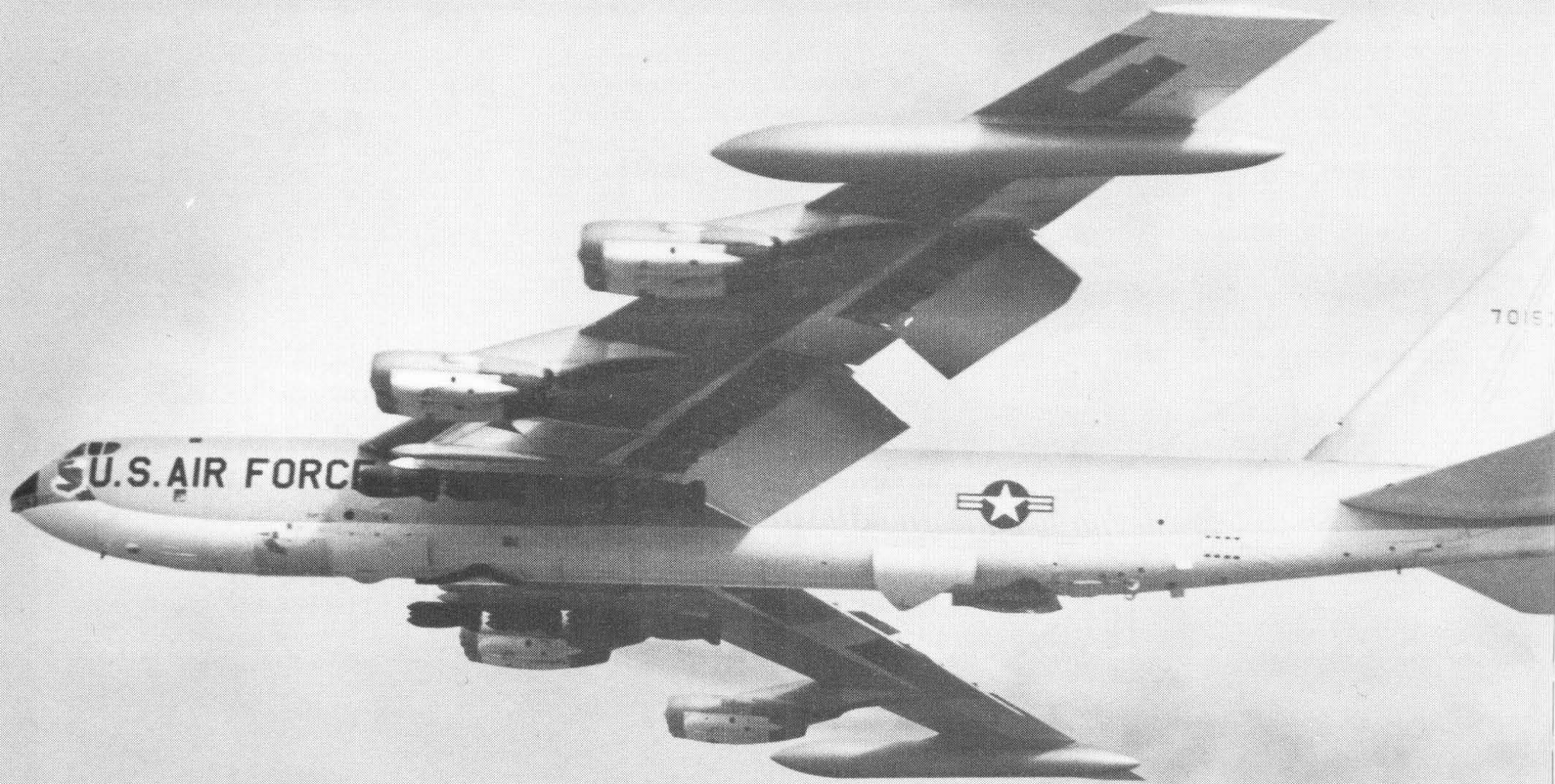


**B-52H**



**B-52 STRATOFORTRESS**





▲ 42 ▼ 43





**42.** The B-52F was the first model of the BUFF to be sent into combat over Southeast Asia, the first aircraft arriving in February 1965 from the 2nd and 320th Bomb Wings. This F takes off on one of the first combat missions in June 1965 loaded with 750lb bombs. (USAF via Bob Dorr)

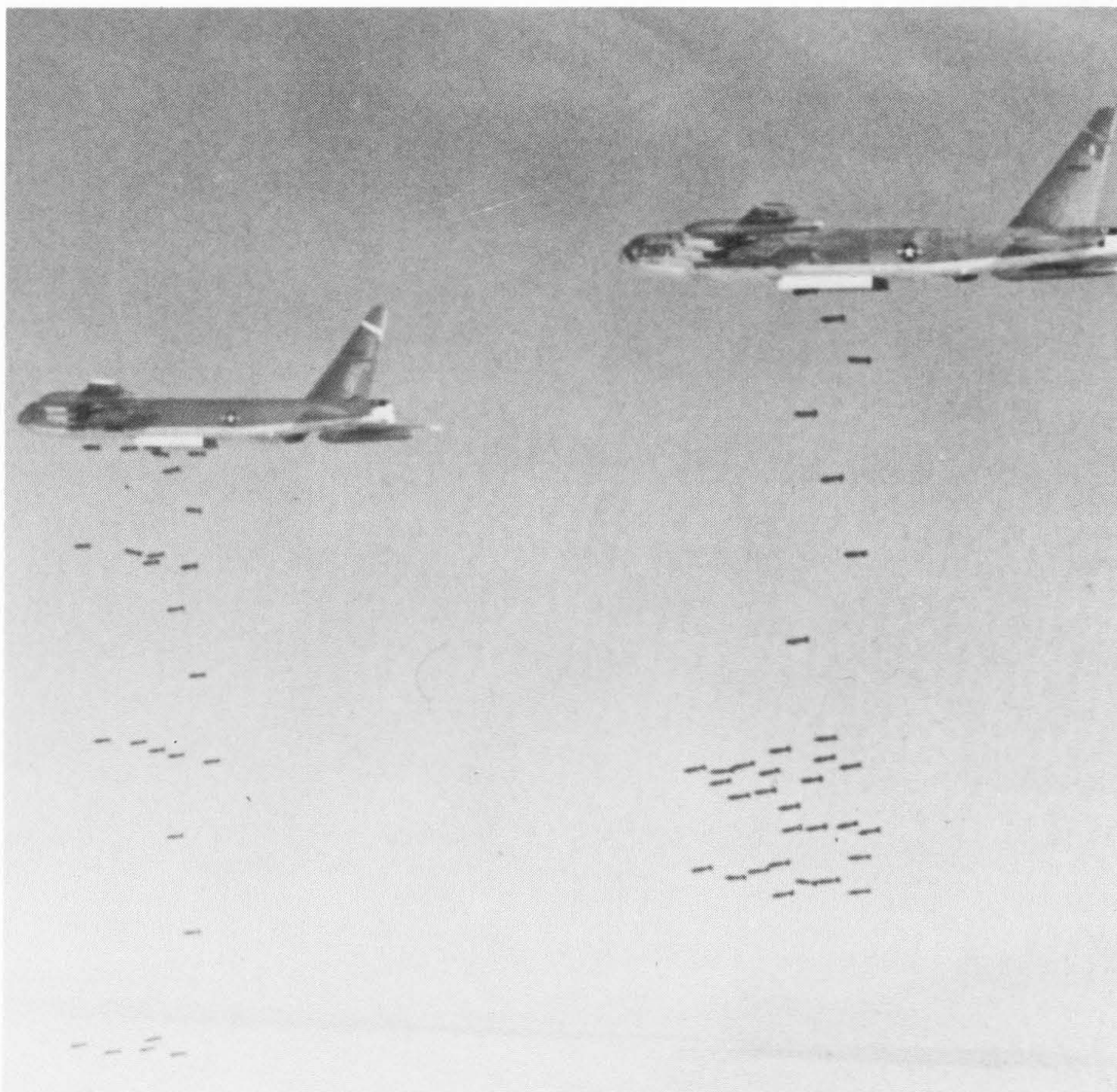
**43.** Crossing the coast of South Vietnam, October 1965, with a load of 750lb bombs, this B-52F was a part of efforts to hit the Viet Cong with strategic bombers. Note the black undersurfaces which took the place of the anti-flash white – at altitude, the black blended better, making the aircraft near invisible – and the numerous mission symbols on the nose. (USAF)

**44.** A B-52F cruises inbound to hit targets in South Vietnam during one of the aircraft's first combat missions. Though tested for conventional weapons delivery at Eglin AFB, the B-52 was never expected to drop anything but nuclear devices. (USAF via Bob Dorr)

**45.** On 7 July 1965, twenty-eight B-52Fs, flying from Andersen AB, Guam, dropped more than 540 tons of 750lb and 1,000lb bombs on Viet Cong staging and training areas, thirty miles from Saigon. The resulting 'earthquake' began the legendary fear the VC had of the BUFF which never gave warning of its approach. (USAF)



44 ▲ 45 ▼







▲ 46 ▼ 47





**46.** Strings of 1,000-pounders fall from a B-52D over South Vietnam. When the D replaced the F in combat, full camouflage and black high-altitude paint became the norm. As it turned out, the D became the backbone of operations in Vietnam due to the 'Big Belly' modification which packed about as much ordnance into the bomb bay as possible. (USAF)

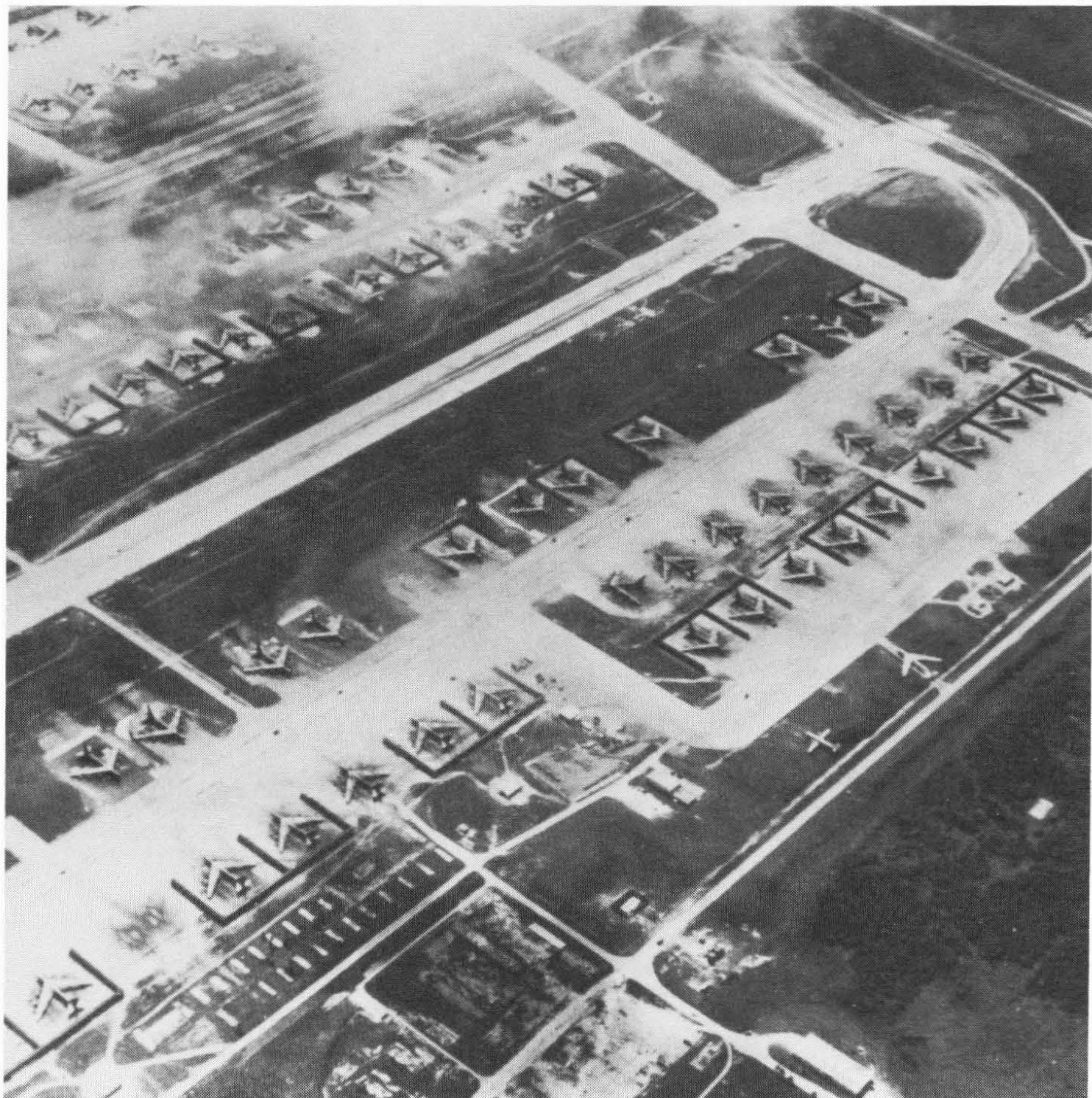
**47.** In addition to the 307th Wing at Andersen AB, Guam, BUFFs were assigned to the 4258th Strategic Wing at U-Tapao AB, Thailand. Here B-52Ds recover at 'U-T' after a mission. Close to the combat zone, the field was of great benefit in getting aircraft on target without the long hours involved from Guam. (NASM)

**48.** The view on Guam usually consisted of acres and acres of bombs. These would be loaded in racks for the bomb bay or on multiple ejection racks for pylons on the wings. At the height of activity in 1972, there were thirty fewer parking spaces than there were aircraft which meant that a force of BUFFs was airborne at all times. (NASM)

**49.** Andersen AB, Guam during the late 1960s was a crowded place when occupied by Stratoforts. In order to get a strike launched, ground controllers had carefully to orchestrate taxi and take-off times so that the taxiways would not become blocked. (NASM)

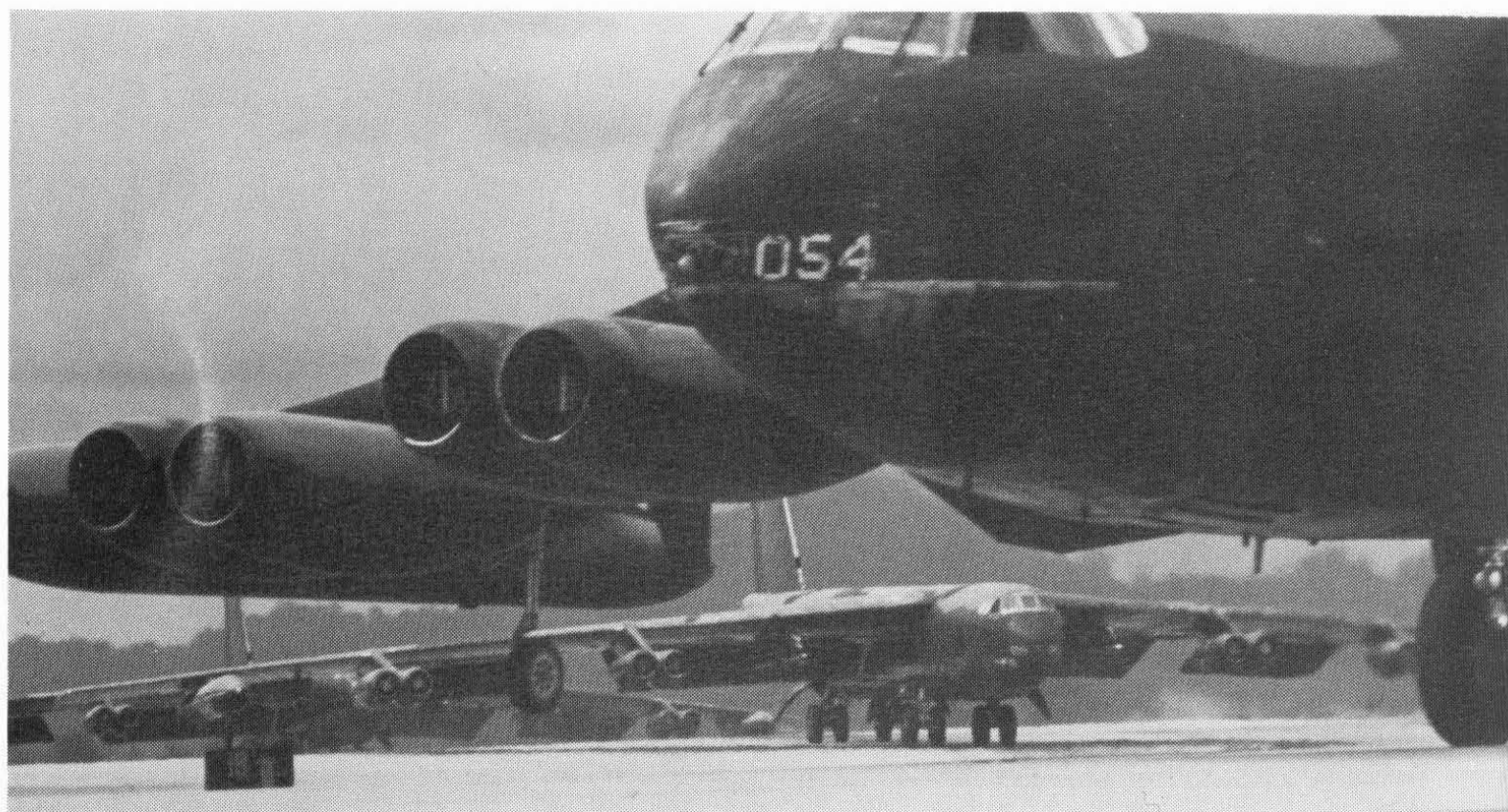


48 ▲ 49 ▼





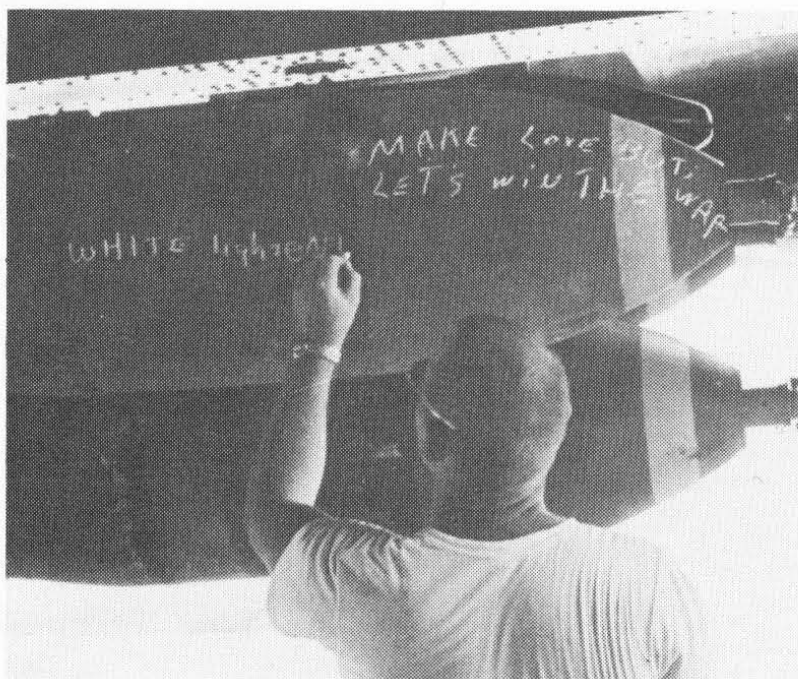
**50.** U-Tapao AB, Thailand in October 1968, with Pattea Beach and the lovely people, was a favourite operational station for B-52 crews. The shorter time to the target was also appreciated since sitting in a BUFF for long periods was not an ideal recreation. (USAF via Bob Dorr)



▲ 50

**51.** A B-52D just after landing at U-Tapao in 1970. Some wing wobble was natural on roll out, as evidenced by the right wing bogie wheel on the runway with the left wing high. (USAF via Bob Dorr)

**52.** Following a tradition from previous wars, BUFF crews wrote messages on their bombs before take-off. The inscription on this 750lb bomb at U-Tapao plays on a very familiar saying of the 1960s. (Bill Turner)



▲ 52

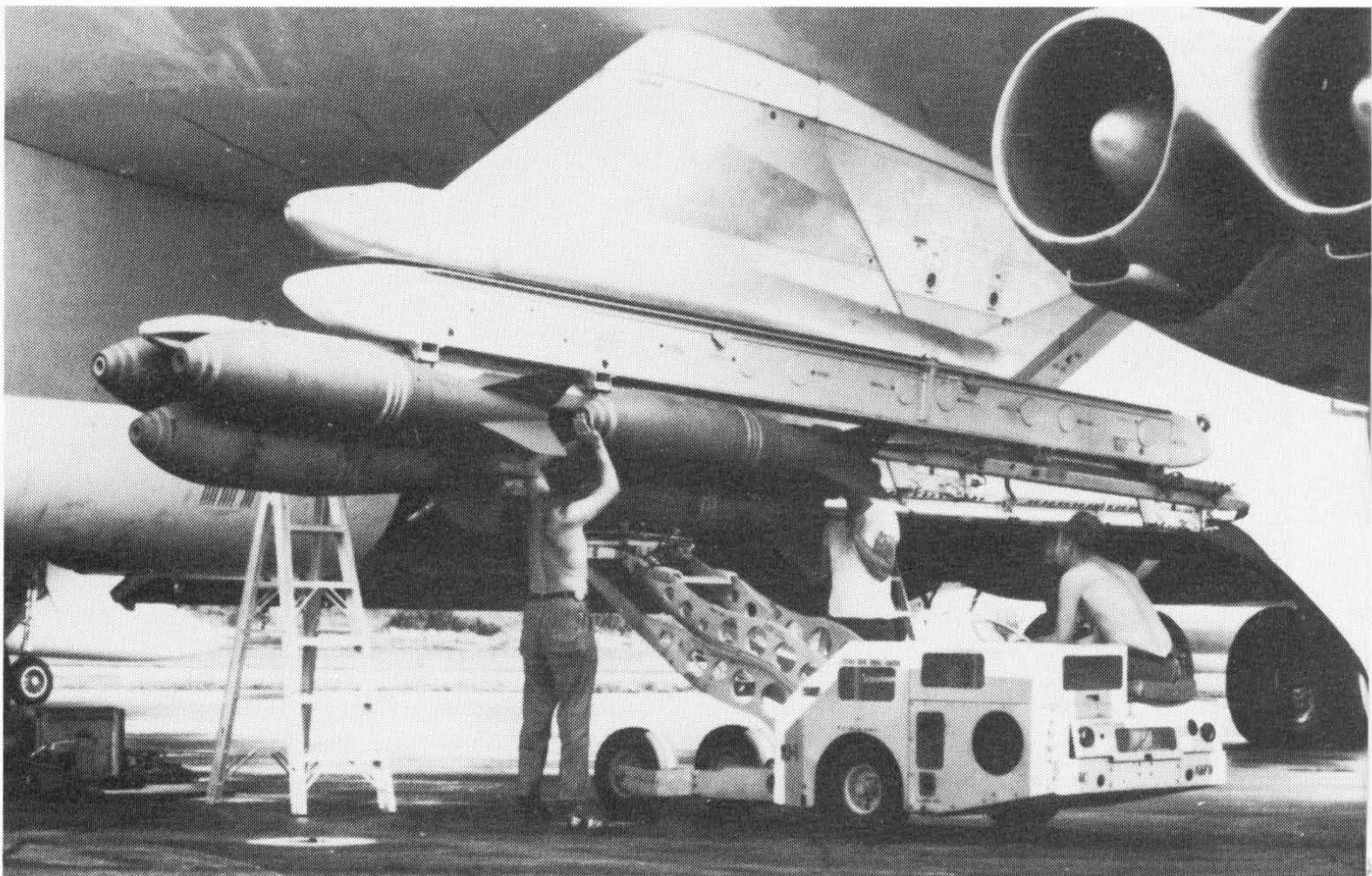
**53.** After briefing and being dropped off at the aircraft, there was not much to do prior to start, except get nervous. Here navigator Clyde Grey from Bill Turner's crew awaits 'step' time at U-Tapao, 1968. Missions seldom lasted more than five hours. (Bill Turner)



▲ 53

**54.** As B-52s ventured up into the DMZ and parts of North Vietnam, they took increasing battle damage. This B-52D suffered damage to its external fuel tank on 9 April 1972 and made an emergency landing at DaNang AB, South Vietnam where fire trucks hosed the leaking fuel. (USAF)

**55.** Loading bombs at Andersen. The BUFF could carry twenty-four 1,000lb or 750lb bombs externally and another twenty-seven internally, and fly 2,200 miles from Guam to Vietnam to deliver them. (USAF)



▲ 55

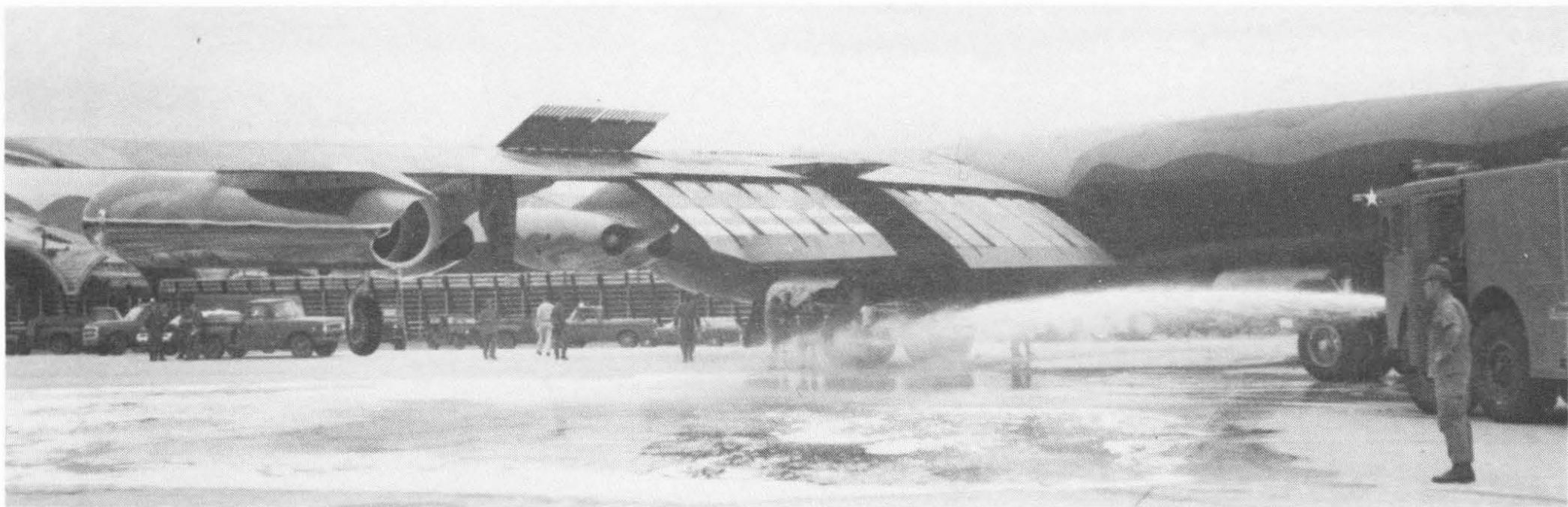
**56.** Special bomb lifts made loading much easier, particularly since strikes from Guam were launched round the clock and spaces had to be vacated quickly. Though fitted with different fins, many of the bombs dropped were said to be surplus stocks left over from previous wars. (USAF)

**57.** Early morning fusing and hanging of 750-pounders on the No. 1 MER (multiple ejection rack) in Guam, 1965. (USAF)





51 ▲



54 ▲



56 ▲

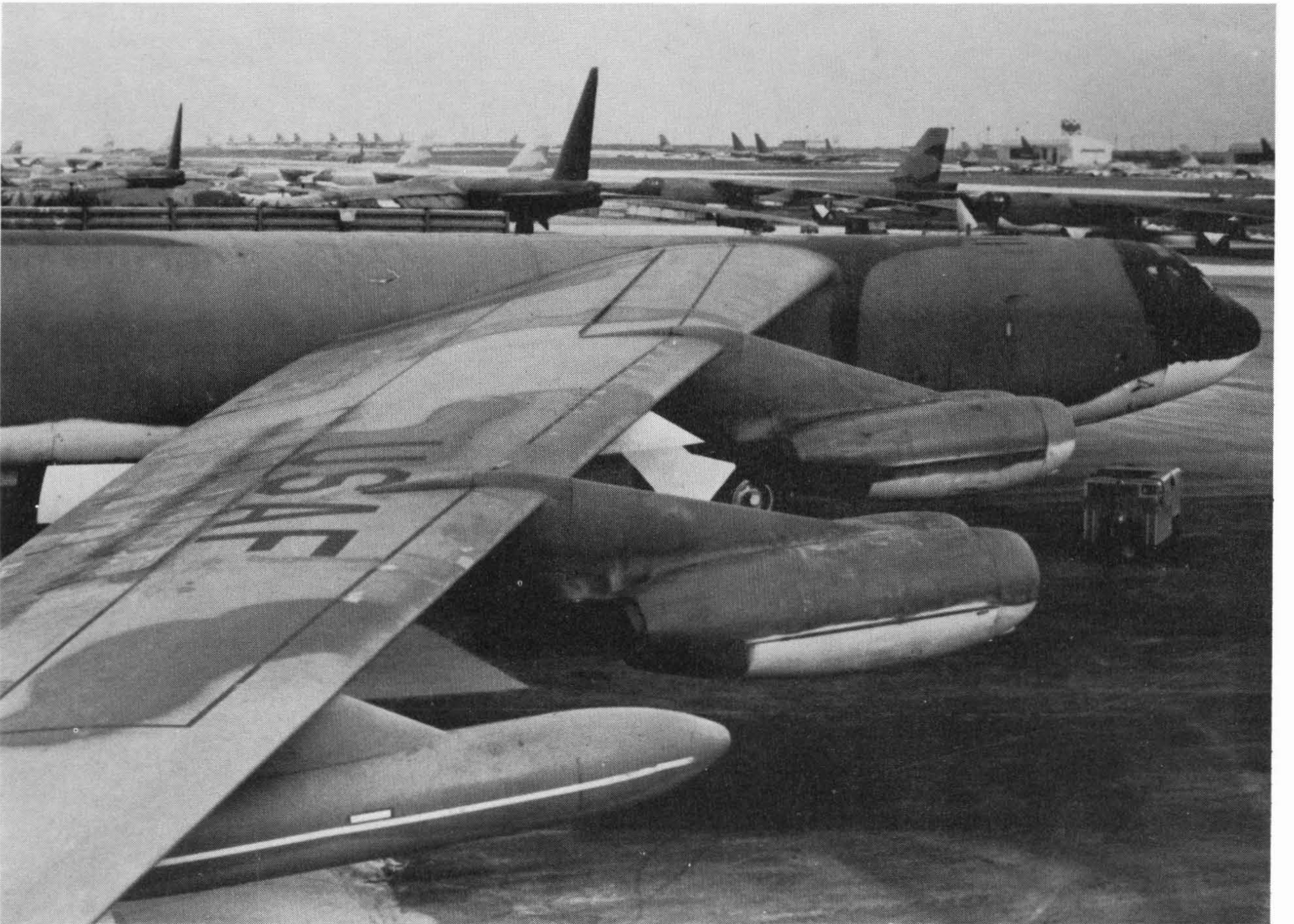


57 ▲





▲ 58 ▼ 59





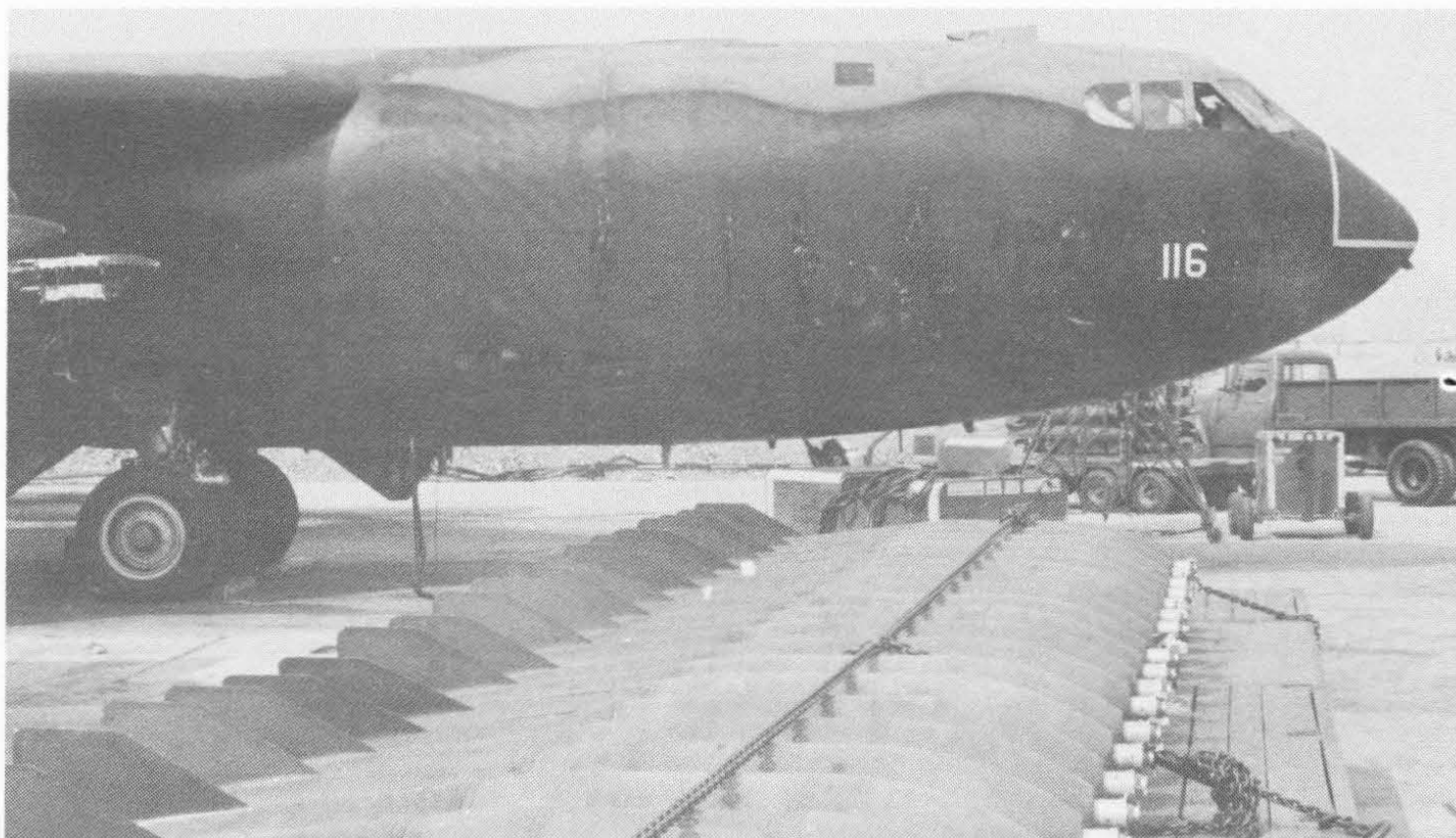
**58.** U-Tapao, 30 October 1972. A freshly reworked and repainted B-52 from the States just prior to engine start for a mission. The field was particularly crowded at that time due to deployment of B-52s from Guam during Typhoon Olga. (USAF)

**59.** By late 1972 Operation 'Bullet Shot' brought additional B-52s into the theatre, including newer B-52Gs, in anticipation of 'going downtown' to bomb Hanoi. Here a long line of Ds and Gs taxi out at Andersen for a mission. (USAF)

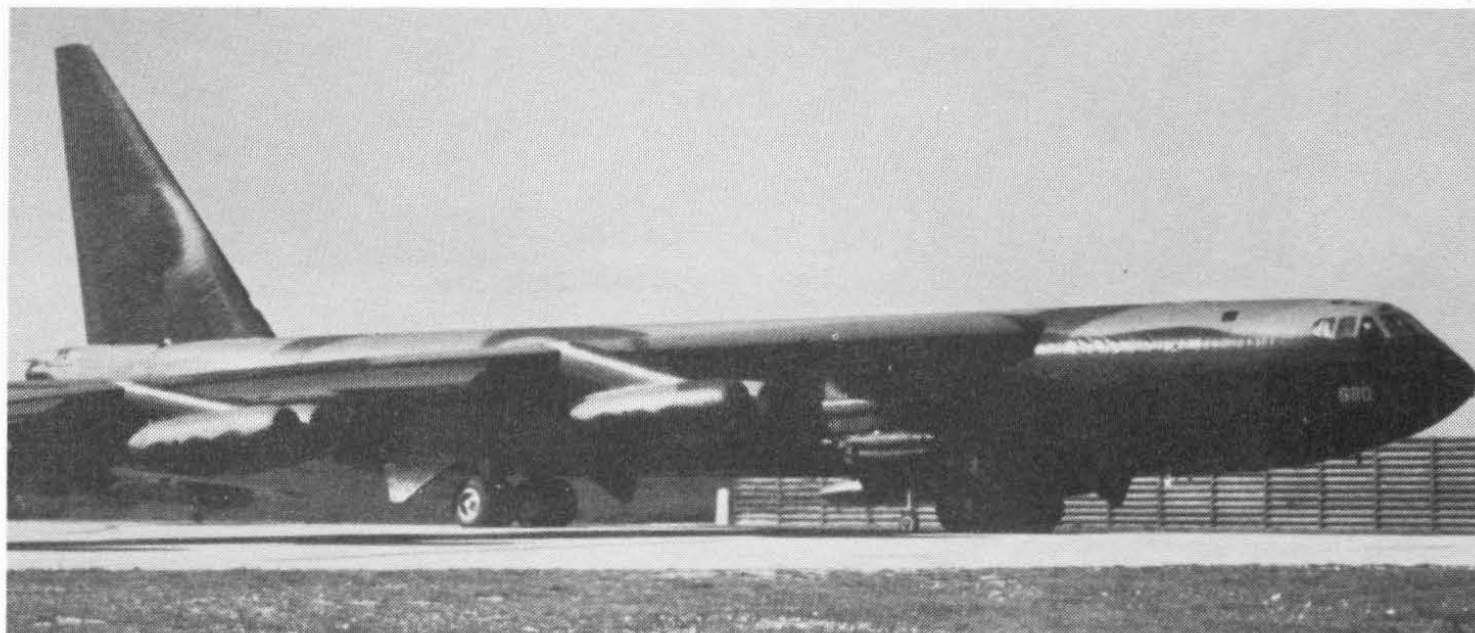
**60.** A 5-ton flat-bed truck, loaded to capacity, backs up to a B-52D at U-Tapao, February 1969. (U.S. Army)

**61.** Taxiing out at U-Tapao, this B-52D looks pretty good, though evidence of respraying can be seen on the tail. Often the 400lb of camouflage paint had to be patched and repatched before the aircraft were sent back for rework and repainting. (Robert Johnson)

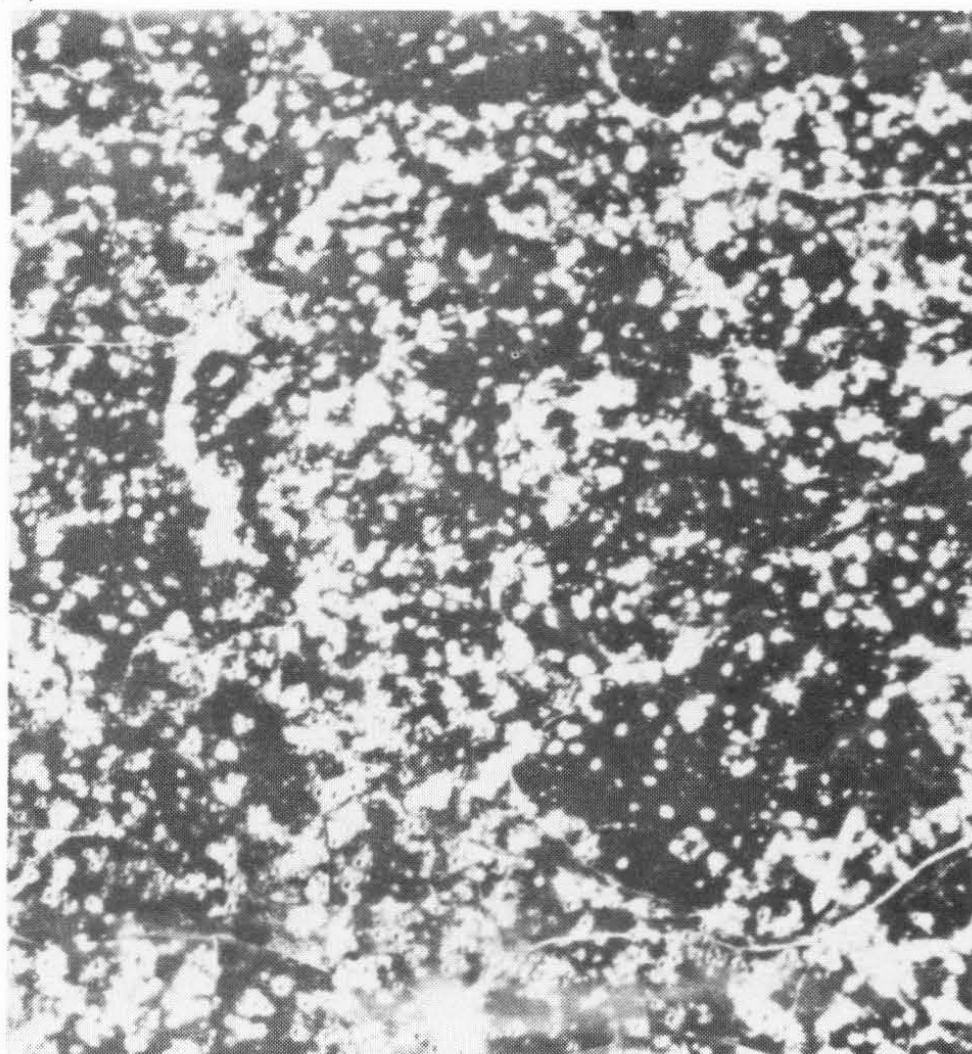
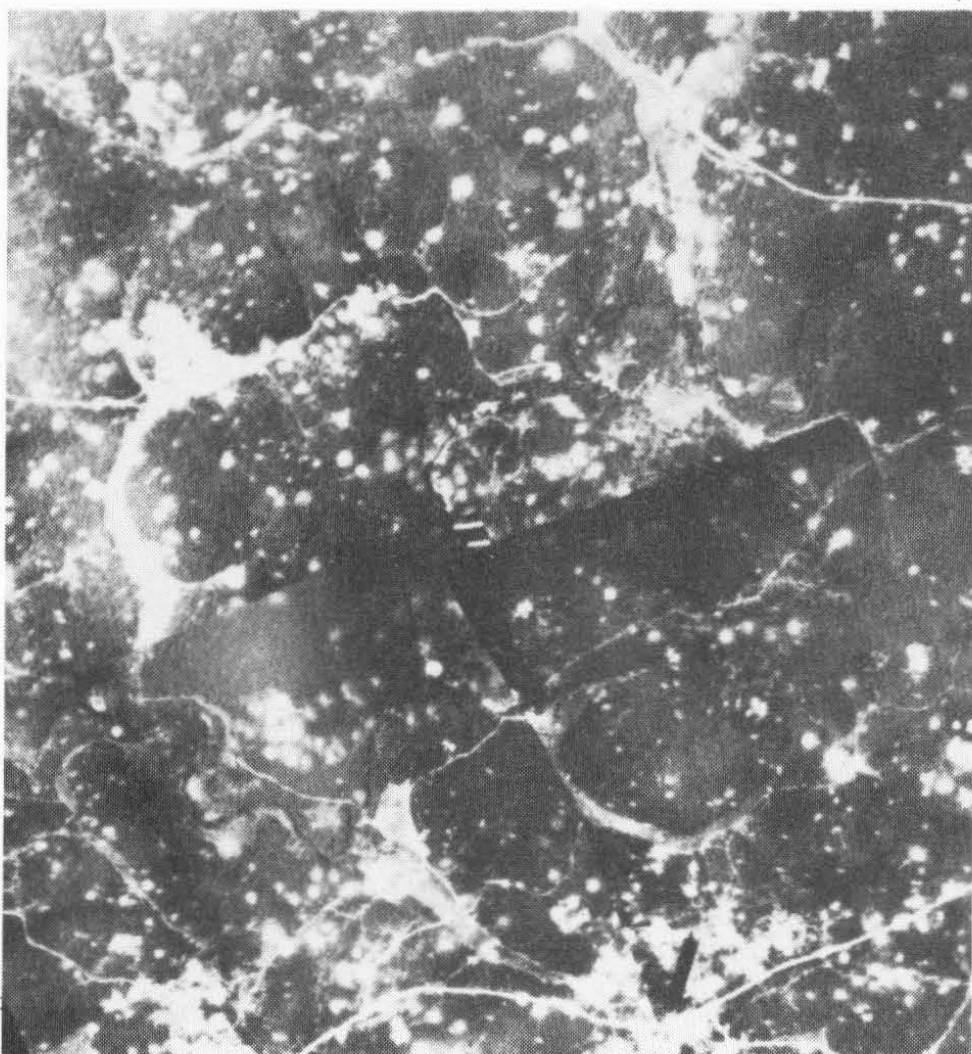
**62.** A before and after shot of a BUFF strike in the DMZ. When B-52s laid down their ordnance, little was left, particularly after repeated strikes. (USAF)



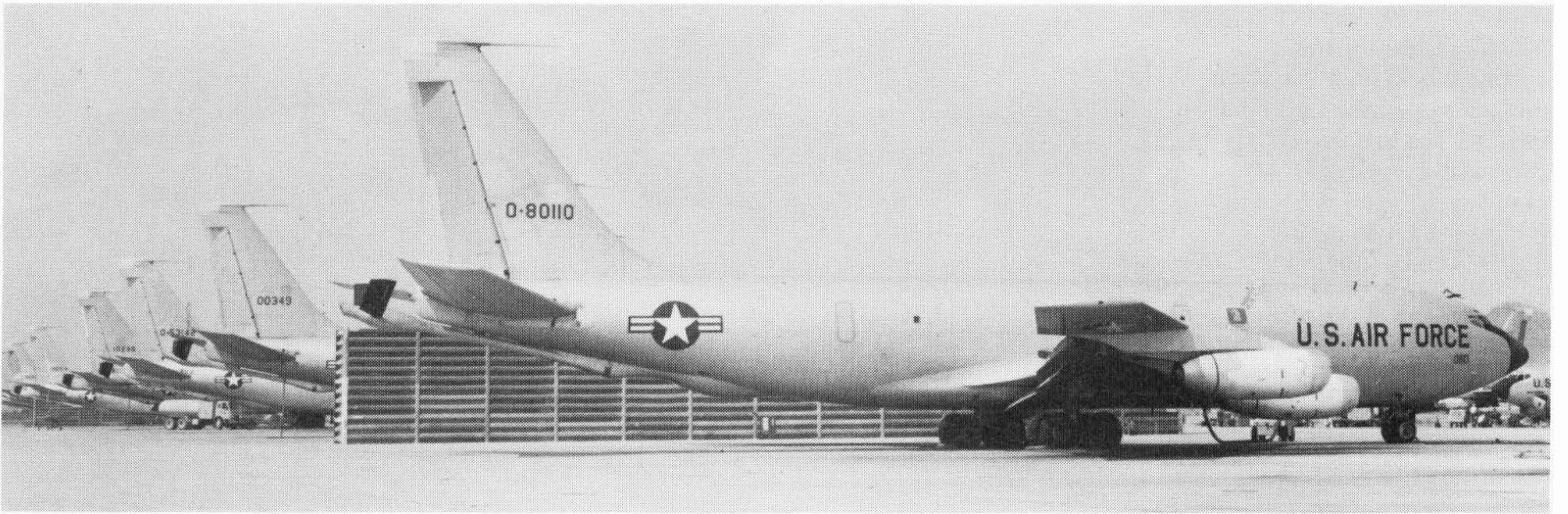
60 ▲ 61 ▼



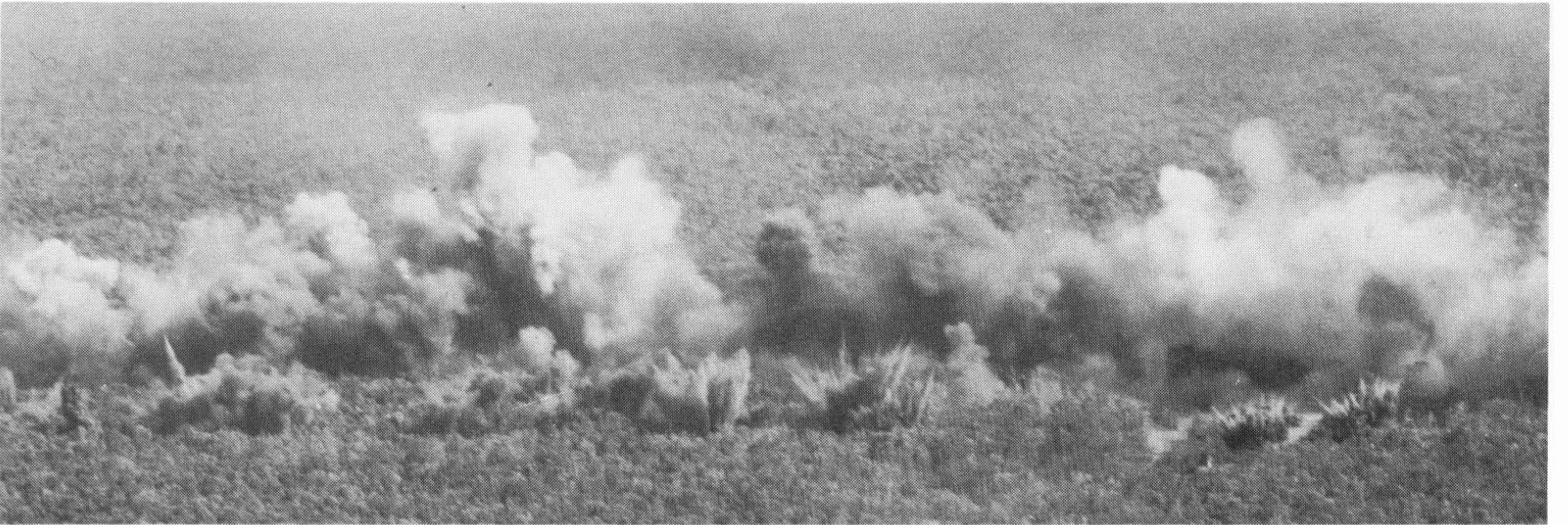
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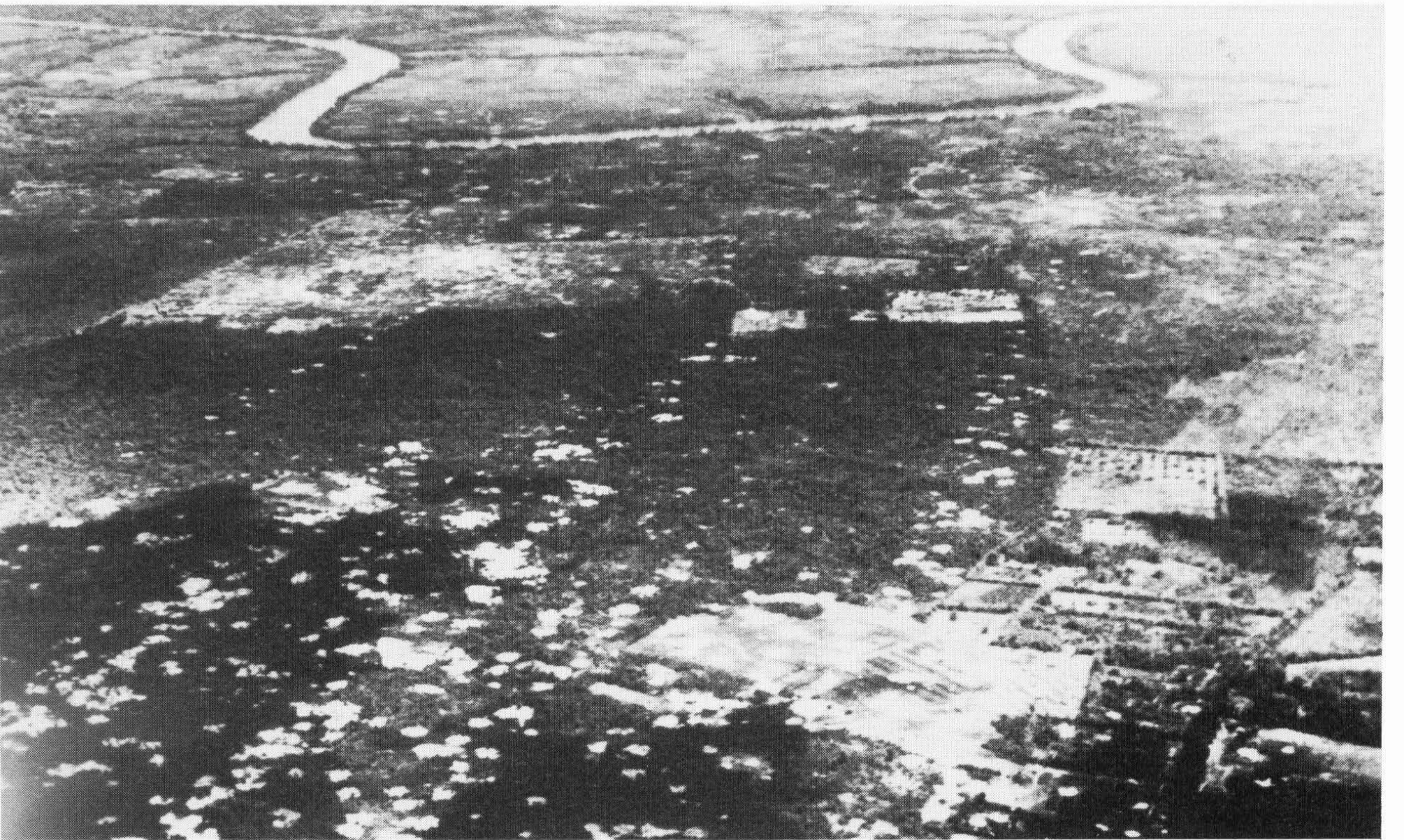




▲ 63



▲ 64 ▼ 65







66 ▲ 67 ▼

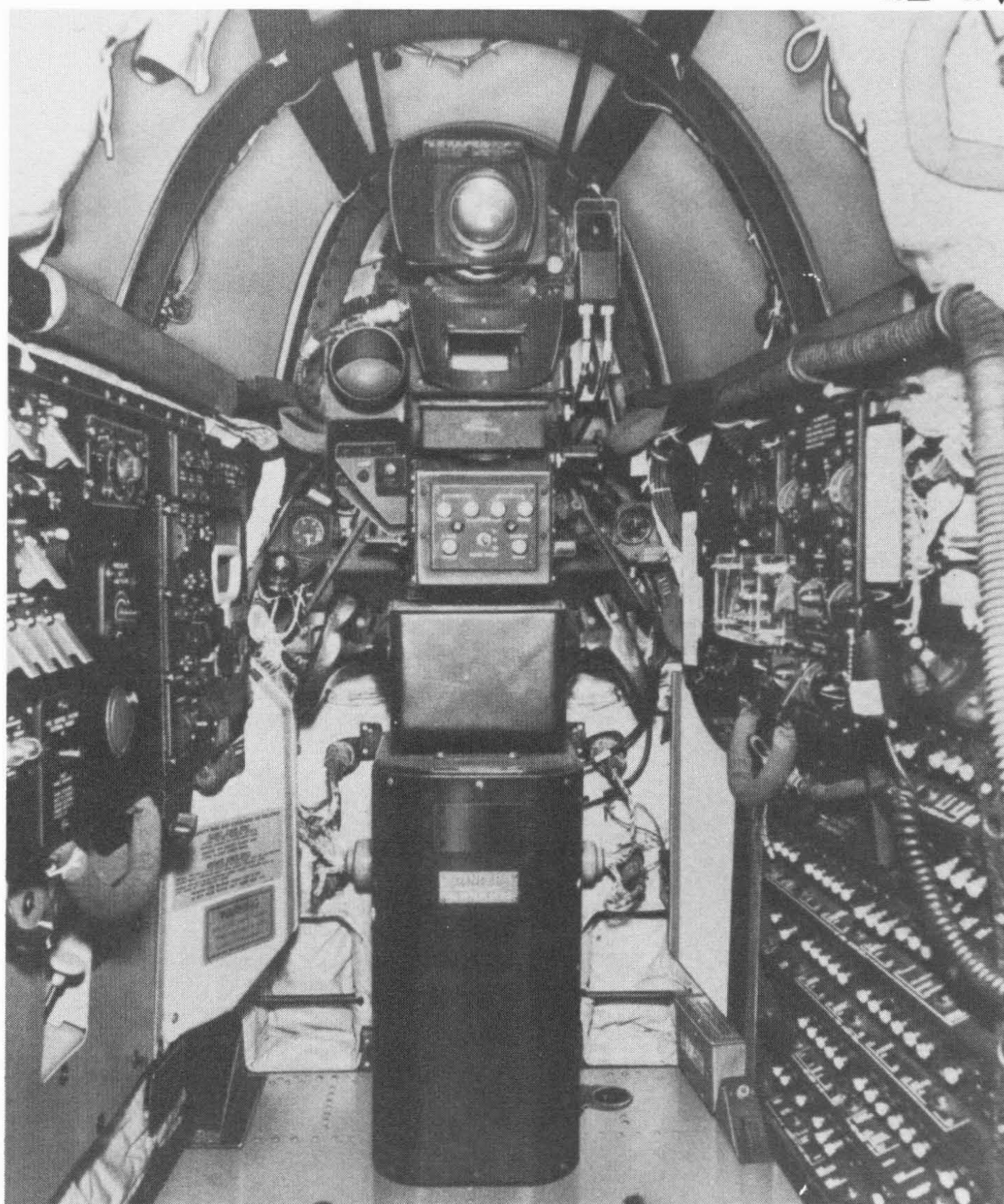
**63.** Part of the KC-135 tanker force in blast revetments at U-Tapao. As with the BUFFs, 'tank' crews found duty in Thailand more enjoyable because of the shorter missions and pleasant surroundings. They were also on alert for the entire USAF fleet in Southeast Asia, which resulted in an outstanding sortie effectiveness rate for rendezvous or emergency refuellings. (USAF)

**64.** The beginning of a B-52 strike on VC staging areas in Tay Ninh Province, South Vietnam, 18 October 1967. Here the second stick of bombs is falling just in front of the first – soon the entire area will be covered in dust and smoke. (USAF)

**65.** During Operation 'Junction City' in 1967, Tay Ninh Province, South Vietnam, began to look like the moon. VC base camps, bivouacs, fortifications and troop concentrations were targeted, as often as four times in a single morning, until US troops were launched into the area. (USAF)

**66.** A 4258th Strategic Wing BUFF just getting airborne out of U-Tapao for a strike in February 1969. U-T was located about 200 kilometres south-east of Bangkok and was but a short hop into Vietnam itself. (US Army)

**67.** A very tight place in which to fly for many hours! This is where the B-52 tail-gunner sat until moved forward in the B-52G and H. Although he was bounced around a great deal at

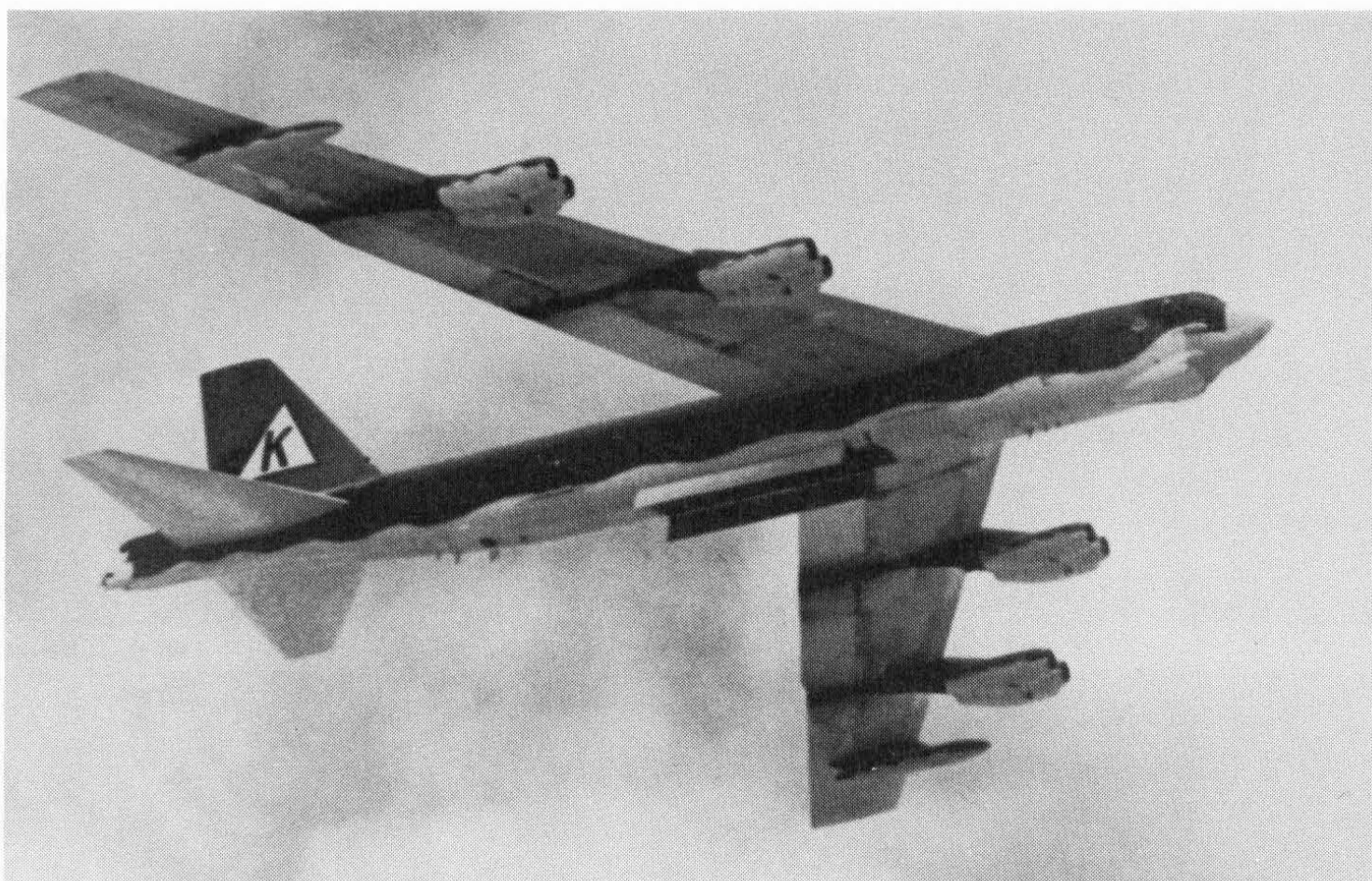


low level, the gunner could do his job when needed as proved on both 18 December and 24

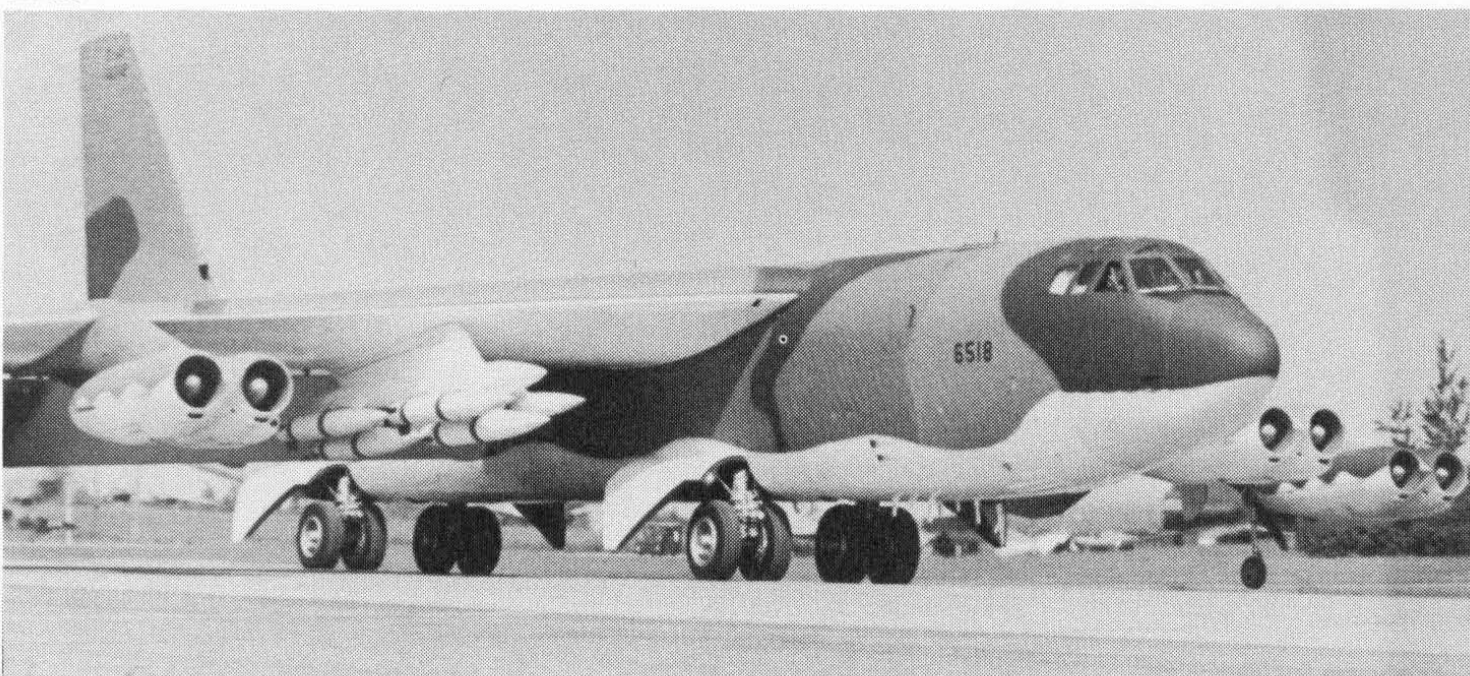
December 1972 when, respectively, S/Sgt. Samuel O. Turner and AIC Albert E. Moore

downed a MiG-21 each from the tails of their B-52Ds. (NASM)

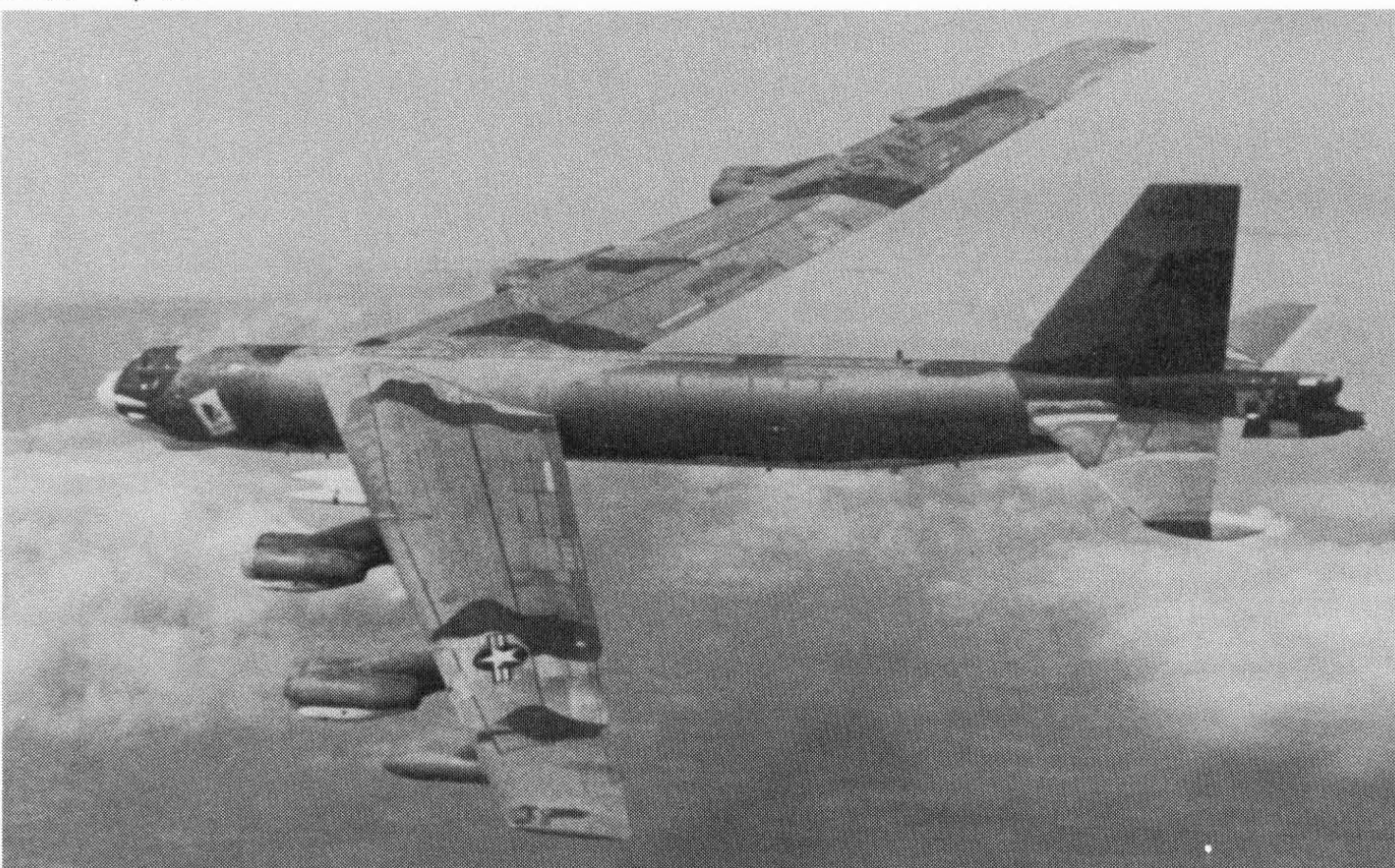




▲ 68



▲ 69 ▼ 70



**68.** A 379th Bomb Wing B-52G makes a run with bomb doors open during the 1980 SAC Bombing and Navigation Competition. The triangle 'K' was a short-lived harking back to the Second World War when the 379th had them on the tails of their B-17s. (USAF via NASM)

**69.** With the increasing capability of Soviet defences in the 1960s, the nuclear SRAM (Short Range Attack Missile) was developed to allow BUFFs a fighting chance of getting through. With a yield similar to that of the Minuteman III, the AGM-69A had a rough punch indeed. This B-52G has a load of twelve externally plus another eight on an internal rotary launcher. (Boeing via NASM)

**70, 71.** This 'Rivet Ace' B-52G was used to test compatibility between the SRAM and the Stratofort as well as fit out a new ECM package to make the aircraft survivable into the 1990s. Much to the amazement

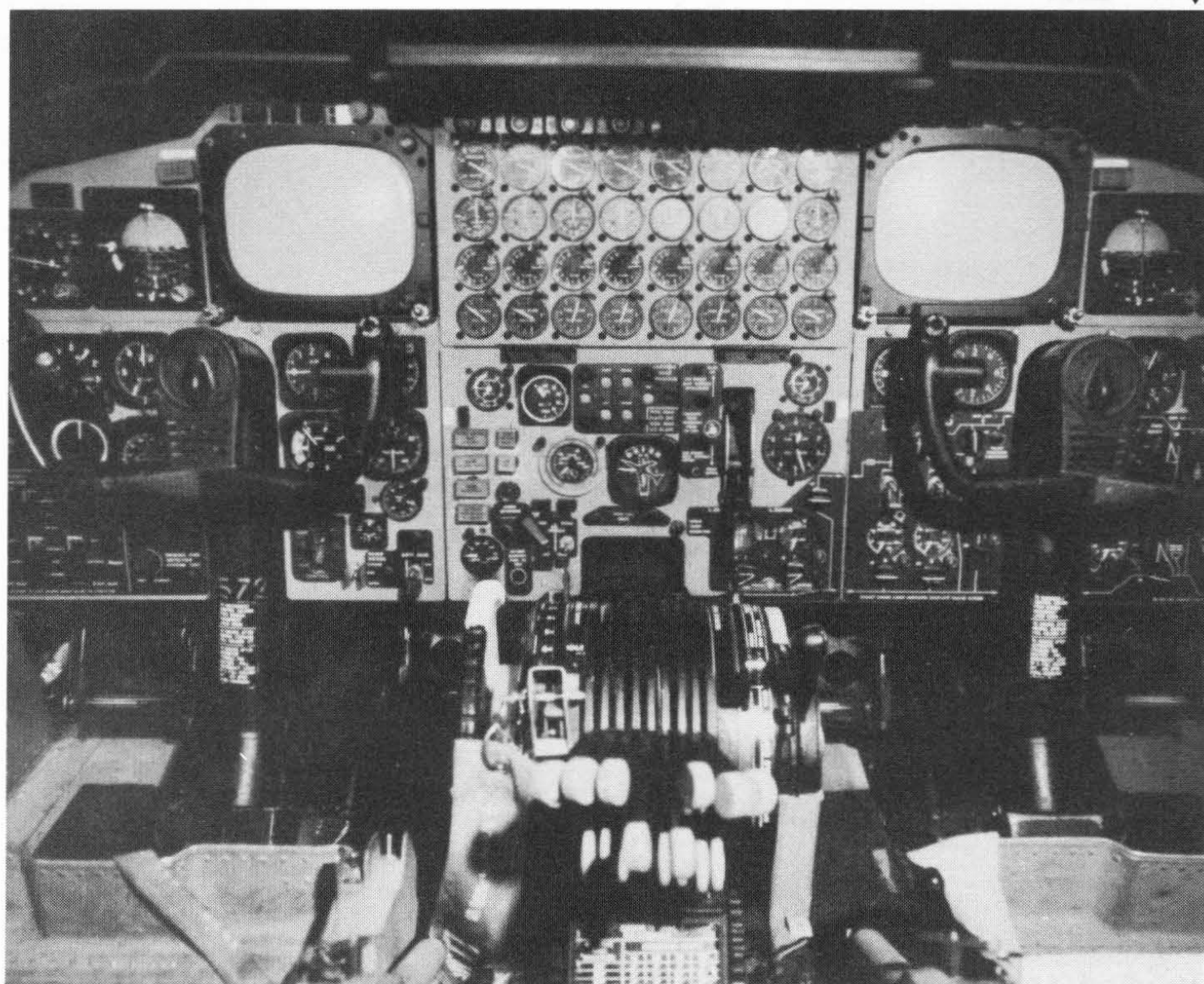




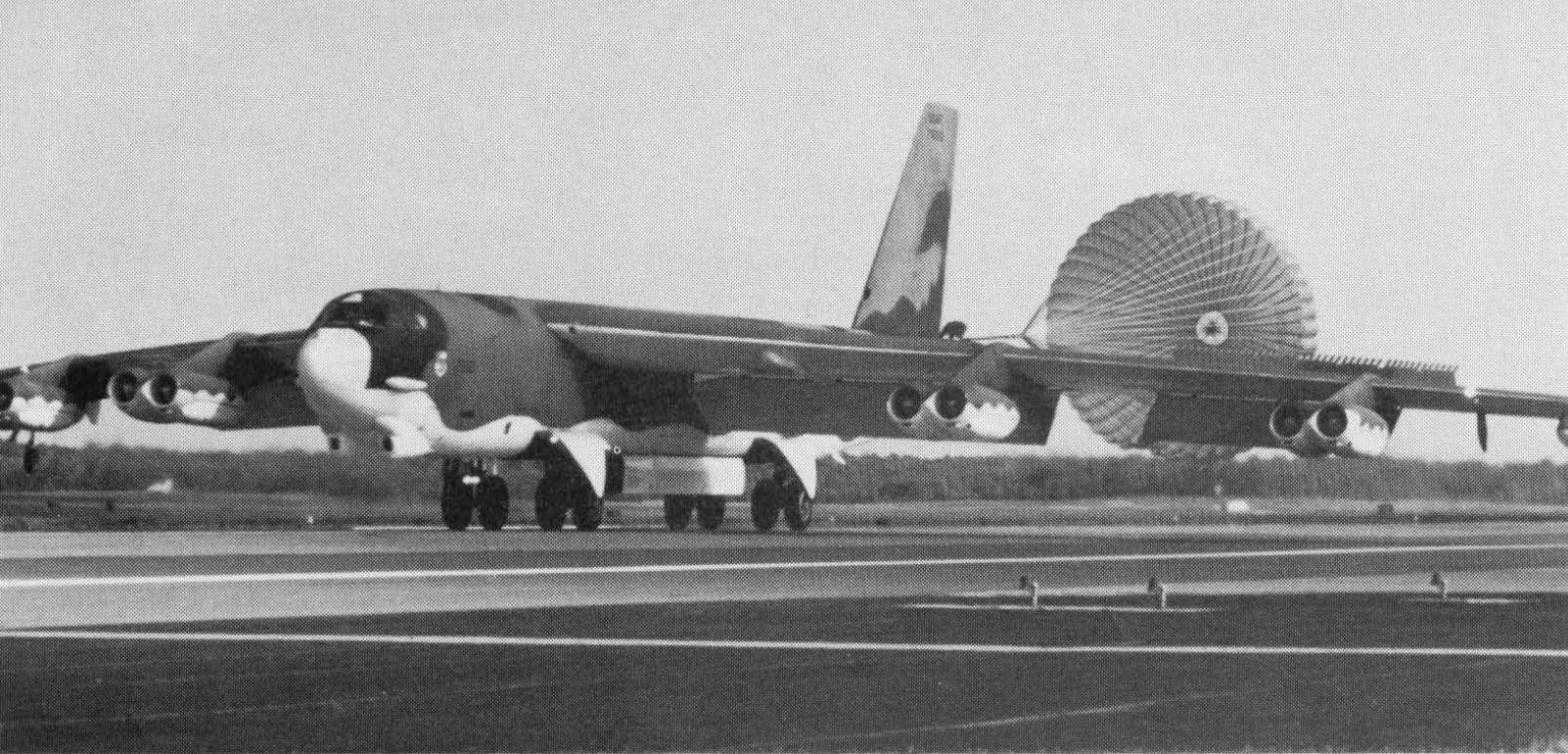
71 ▲ 72 ▼

of military planners, the B-52G and H can still penetrate sophisticated defences while carrying a larger bombload on less fuel with longer range than its B-1B replacement. (Boeing)

**72.** Compare this modern B-52 cockpit with that in photograph no. 37. Electro-Optical Viewing System (EVS) screens have been added for the TV/IR sensors mounted on the nose. This system allows pilots of both Gs and Hs to fly low-level night or day with excellent visual cues to terrain and ground detail together with head-up display information. (Boeing via NASM)







▲ 73

**73.** A B-52G slows down on landing with everything out. Note the bomb doors are open and the EVS sensors on the bottom of the nose are open for viewing. (via Bob Dorr)



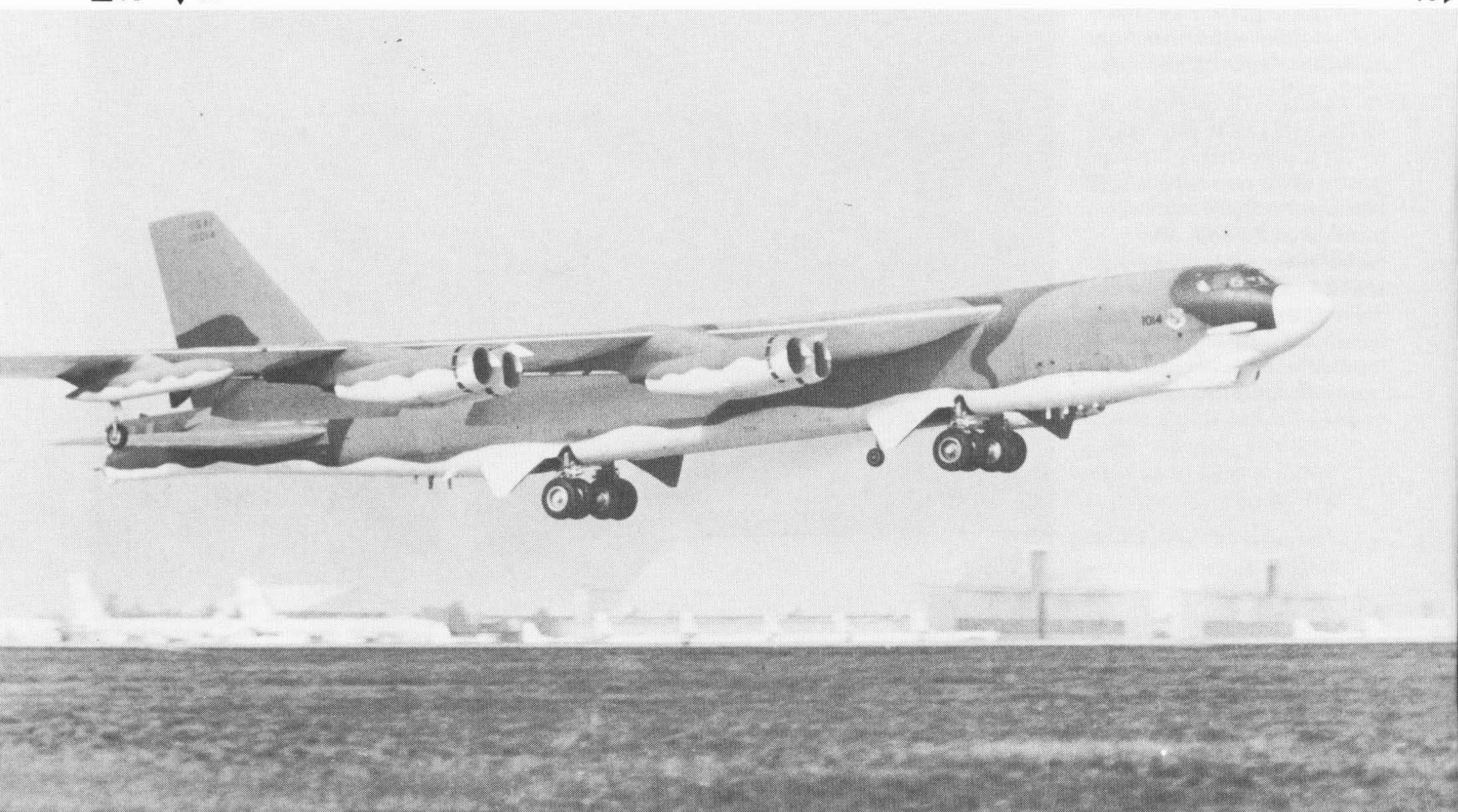
▲ 74 ▼ 75

**74.** This B-52H is rolling out on landing at Biggs Army Air Field, TX during 'Busy Prairie II' in June 1981. The drogue chute compartment door can be seen as well as the fully deployed spoilers on top of the wings. The only major external difference between the G and H are the latter's larger fan engines. (USAF via Bob Dorr)

**75.** A B-52H just after lift-off from Andrews AFB, Maryland, July 1976. The host of antennae and bumps reveal the extensive avionics and ECM refit the BUFF went through in order to make it survivable into the next century. (USAF via Bob Dorr)

**76.** A B-52H pilot and co-pilot head out over the Pacific towards Darwin, Australia on 1 November 1982 to participate in 'Glad Customer 82' exercises. Though considered a handful when first introduced to SAC, the BUFF is now flown by crews straight out of flying school who are younger than the aircraft they fly. (USAF via Bob Dorr)

76 ▶



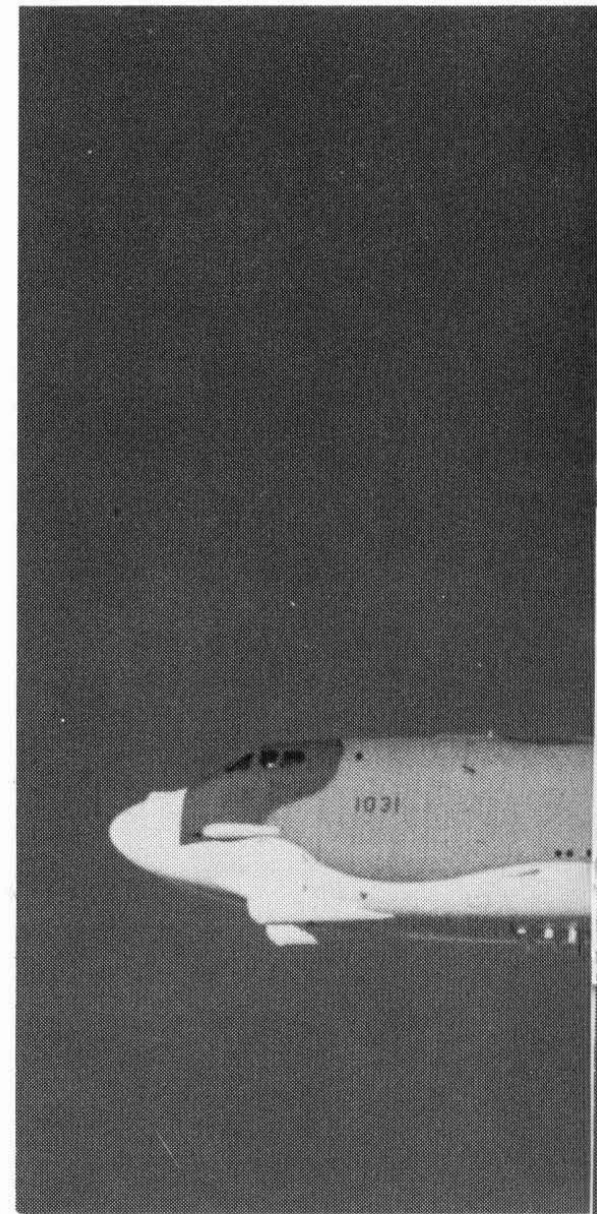








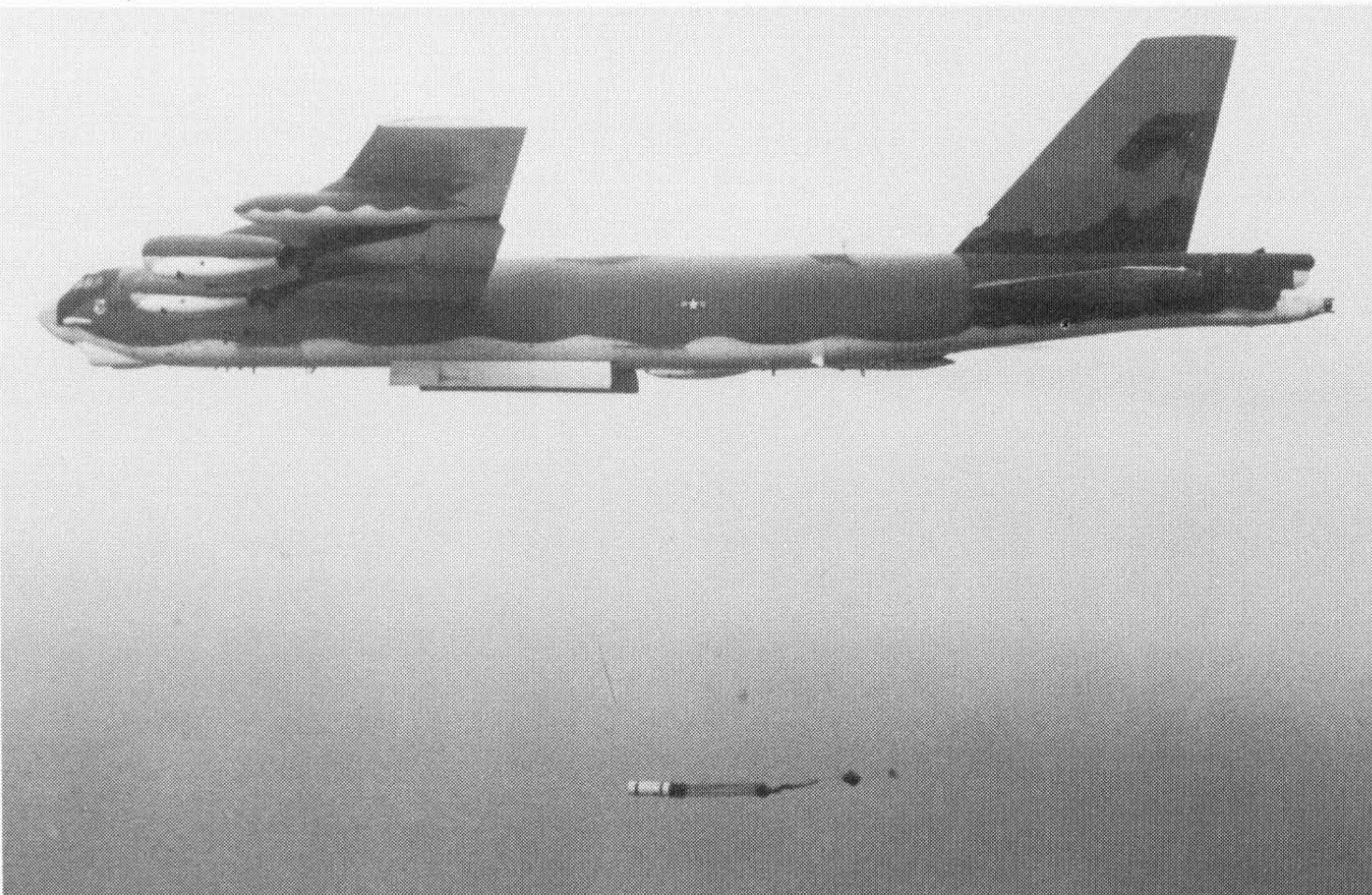
▲ 77



**77.** Sea surveillance has been added to the B-52's missions and its great success has been a pleasant surprise. With its massive range, long loiter time and large weapons bay, the BUFF can shadow anything on the water. Though other cameras are used for the most part, this hand-held 35mm shot does the job quite well. (USAF)



▲ 78 ▼ 79



**78.** On 6 April 1978 B-52s from K.I. Sawyer AFB, Michigan intercepted the Soviet aircraft carrier *Kiev* north of Scotland, then stayed for three hours to photograph the ships on manoeuvres. The flight from Michigan took 15 hours and this 35mm hand-held shot shows it was worth the effort. (USAF)

**79.** For sea missions the Stratofort can be equipped with eighty Mk 40 aerial mines and drop 43 at once from 400 to 600 feet. It can also carry eighteen encapsulated Mk 60 torpedoes which can lay dormant for long periods until receiving a signal to hunt for passing submarines. The aircraft can also perform ship interdiction using Harpoon missiles. (via Bob Dorr)





80 ▲

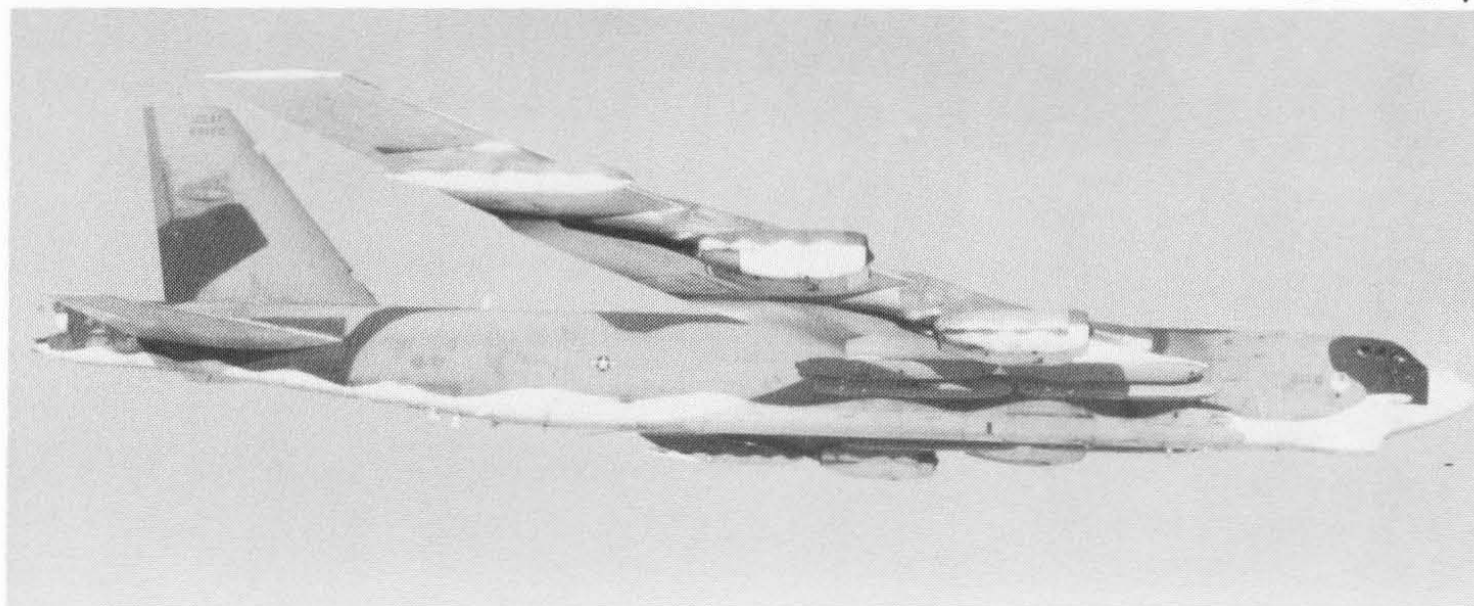
**80.** Despite bumps and antennae, the B-52H remains a clean and imposing aircraft considering its age. Pilots find the H to be the best of the breed, due in particular to the extra power available from its TF33 engines. (Boeing)

**81.** The splotchy paint on this B-52G from Fairchild AFB, Washington, attests to the long hours of flying between refits. By virtue of being tried and proven, the aircraft tends to have a high serviceability rate. (USAF via Bob Dorr)



81 ▲ 82 ▼

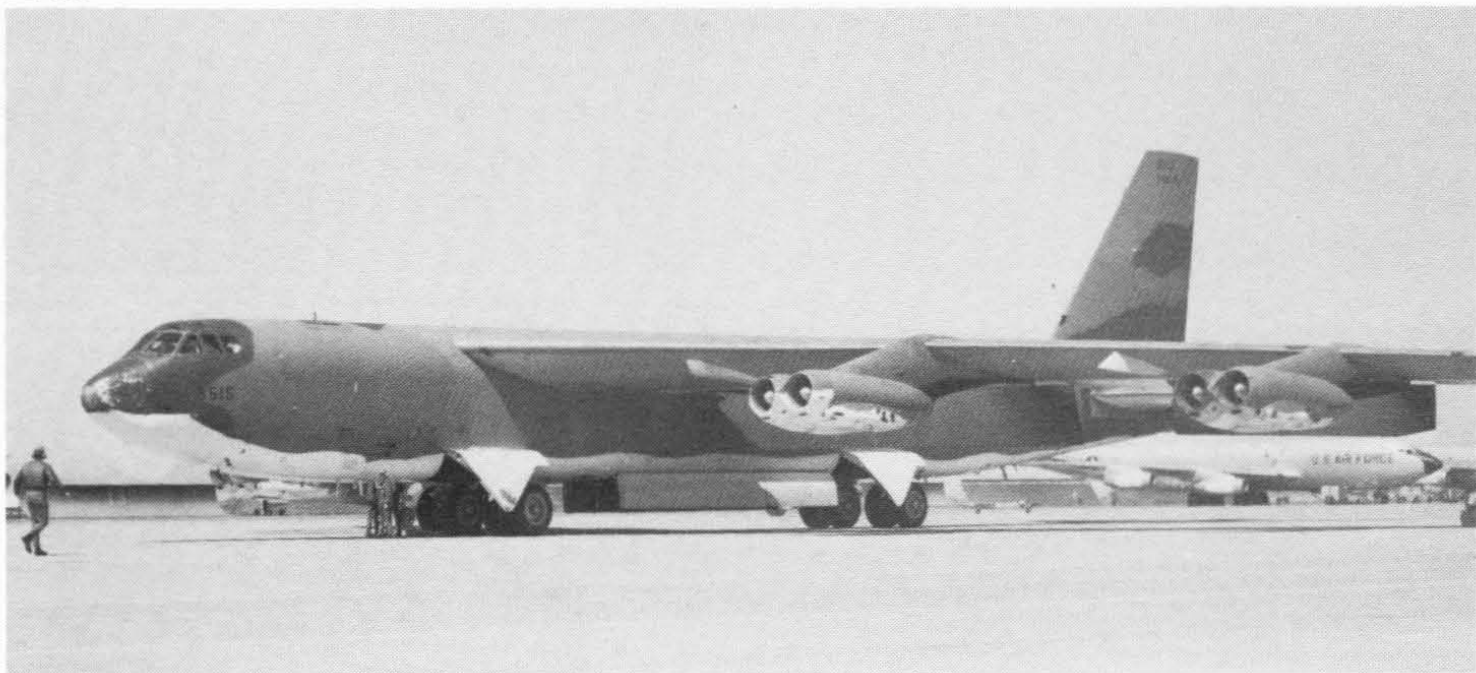
**82.** This B-52G of the 416th Bomb Wing, Griffiss AFB, NY is carrying twelve AGM-86 Air Launched Cruise Missiles (ALCM), each with a range of 1,500 nautical miles. This weapon, which extends the BUFF's nuclear stand-off capability, ended up being quite a bargaining chip in Soviet/US strategic arms limitation talks, due to its versatility and difficulty to detect. (USAF via Bob Dorr)







▲ 83



▲ 84 ▼ 85







**83.** A B-52G of the 68th Bomb Wing, Seymour-Johnson AFB, NC fills this view from the boom operator's position of a KC-135. Inside the Stratotanker one can literally feel the air deflected by the BUFF as it bumps into and pushes up the 135. The constantly changing dynamics are quite a challenge for B-52 pilots – note the deployed spoilers acting in place of ailerons. (Jeff Ethell)

**84.** 15 April 1972 – An Operation 'Bullet Shot' B-52G at Beale AFB, CA is readied to deploy to Southeast Asia as a part of the build-up for the final bombing campaign to end the war. (USAF)

**85.** Having just been fully fuelled, a B-52H at Grand Forks AFB, North Dakota is given a final going over before being placed on alert, April 1981. SAC continues to have its aircraft and crews on instant readiness against the event of nuclear war, the original mission of the aircraft. (USAF via Bob Dorr)

**86.** Plugged-in to take on fuel, this B-52H can swallow more than 100,000 pounds of fuel at a time. Though pilots can't say they enjoy staying plugged-in for as long as twenty minutes, they talk with pride about the ability to do so. (USAF via Bob Dorr)

**87.** Oil burner – a B-52G down in the weeds during a practice low-level mission. Although the air is rough down low, particularly on a hot day, the BUFF can be man-handled into performing its mission. The surprise to most is how well it continues to fly low-level missions for which it was not designed. (USAF via Bob Dorr)







▲ 88 ▼ 89



**88.** Carrying a new camouflage scheme and cruise missiles, this BUFF also has had 'strakelets' added between the fuselage and wing, giving, for once, a pleasing change to the aircraft's shape. Currently normal weapons load is eight SRAMs internally and twelve ALCMs under the wings. (USAF via Bob Dorr)

**89.** As the B-52 gets older the earlier models continue to be

sent to Davis-Monthan AFB, Arizona for storage. This is the B-52A which carried the X-15 and many other research vehicles into the atmosphere for test. (NASM)

**90.** This is Davis-Monthan AFB in 1971 – now well over 100 B-52s are in storage while about 250 G and H models remain in service with SAC. Although almost all the stored aircraft are older tall tails, particularly Ds,

the SALT II agreement called for them to be counted as operational (Air Force Museum)

**91.** In compliance with arms limitation agreements and simply due to obsolescence, these B-52s at Davis-Monthan are being hacked apart and melted down, the fate of most older military aircraft which cannot find a use in the civilian world. (via Bob Dorr)







90 ▲ 91 ▼





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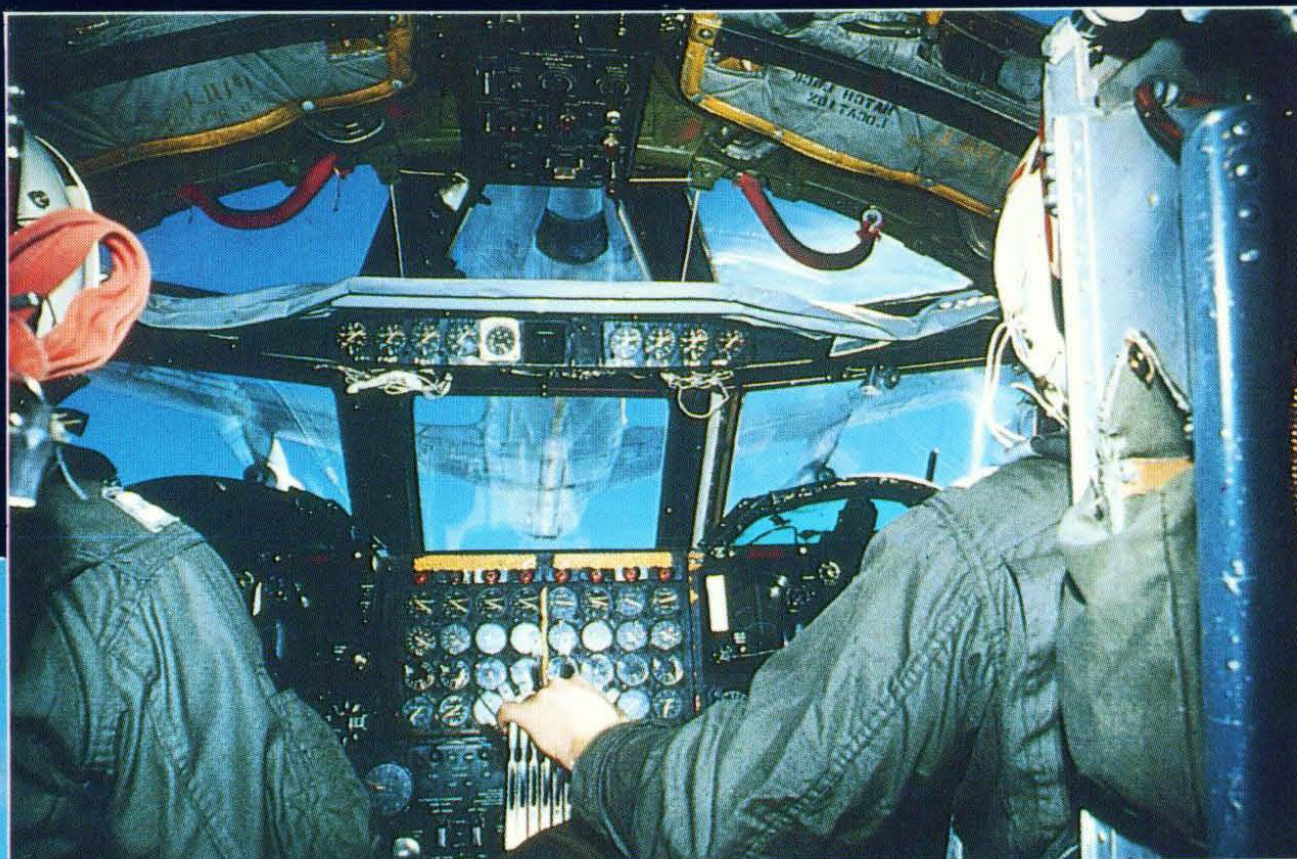
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£4.95 net

**Arms and Armour Press**  
 Artillery House, Artillery Row,  
 London SW1P 1RT.

Cover design by David Gibbons  
 Printed in Great Britain.

Sterling Publishing Co. Inc.  
 2 Park Avenue, New York,  
 N.Y. 10016, USA.  
 Capricorn Link (Australia)  
 Pty Ltd,  
 P.O. Box 665, Lane Cove,  
 N.S.W. 2066, Australia.

ISBN 0-85368-937-7



9 780853 689379